The Madras Veterinary College Annual

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EDITORIAL BOARD

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OUR PRINCIPAL

DR. I. D. MANTRAMURTI was a student of this College during the years 1936—1940 and belonged to the first batch of B.V.Sc. students. During his student days he was the Champion athlete for three successive years besides captaining the hockey team for two years. He was an athlete of all round ability and he was versatile in all the games, especially hockey, football and cricket.

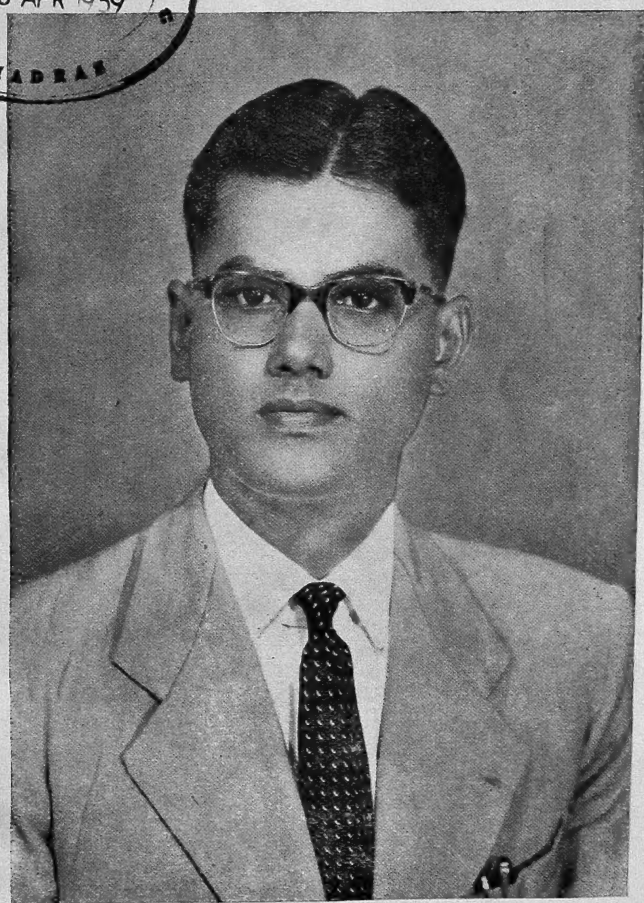
He worked as a Veterinary Assistant Surgeon till 1942 when he was appointed as a District Veterinary Officer by direct recruitment. He was the Superintendent of the Livestock Research Station, Hosur, for a short time. In 1948, he joined the staff of the College as the Lecturer in Hygiene which post he held till his promotion as Deputy Director of Animal Husbandry in 1954. He also held the office of the Sports Secretary during that time with conspicuous success and distinction.

In September 1958, he came back to his old College as the Head. His winning smile and *camaraderie* and keen interest in the welfare of the students have endeared him to each one and all of us. Being a sportsman himself his interest in the sports activities of the Institution is proverbial. The players remember, with gratitude and elation, when in spite of numerous calls on his time, he personally witnessed the various matches. His presence, needless to say, encouraged the players in no small measure and their performance improved to a great extent.

He has a tremendous drive and organizational capacity and I am sure that, under his guidance, the name and fame of the College will reach greater heights.

'A Student'

Our Principal



Dr. I. D. Mantramurti, G.M.V.C., B.V.Sc.

Editorial

"IF A MAN shall steal an ox or a sheep and kill it or sell it ; he shall restore five oxen for an ox and four sheep for a sheep."

I was just reminded of this law, mentioned in one of the most venerable books as I was pondering over crowded thoughts about the bringing up of our magazine. It really gives me great pleasure to find out that we have been actually doing, if not bettering what has been suggested, though we have never dreamt going near any of the offences or obsessions which may attempt to rectify and remedy. The fact that we are not satisfied with what has been done already to improve the prevailing measures and methods of Animal Husbandry and Veterinary Science as a whole can be clearly seen from the innumerable attempts undertaken and insurmountable obstacles overcome by our leader in the past.

Yes, I mean our former Principal Dr. Bertie A. D'Souza to whom we had to bid farewell during the beginning of this year. He had been associated with the college for a long span of five years showering his knowledge and guidance on it incessantly. His last though not the least, ambitious attempt of adding a block to the existing building was very near completion when he had to leave us under the care of Dr. I. D. Mantramurti.

There opened our diary for this year with a farewell function held in honour of of Dr. Bertie A. D'Souza and Dr. D. Mariappa who had to leave us for the United States for Higher studies under the T.C.M. Programme. It had been the tradition of the Madras Veterinary College to give the best to the State and the country, and hence when the call for the sacrifice of our two great leaders came, we responded to the call with our hearts filled with emotion, in order not to be guilty of breaking the tradition, we wish both of them all the best in their studies, taking this opportunity to turn the tables at least once.

"If hopes were dupes fears may be liars" seems to be an old proverb which still remains young. Dr. I. D. Mantramurti and our college were so closely inter-related that we were not receiving a new personality in the new Principal. In fact, we could not have hoped to receive any other person as the main spring, the balance wheel or the pivot of our college except Dr. I. D. Mantramurti, because he had not only been a member of the college staff for over six years but actually been the executive representative of our college in the Department in the past, due to the close attachment he and our previous Principal had been enjoying.

The farewell function of Dr. Bertie A. D'Souza and Dr. D. Mariappa coincided with the reception given to Dr. K. N. Govindhan Nayar to whom we have to be more than obliged. He was adjudged the best Indian Professor in the University of Tennessee where he was serving during his stay in the States under T.C.M. and was requested to stay longer, if not at least a year more. But his affection to our students and attachment to the college forced him to return to Madras inspite of the innumerable requests and requisitions made.

The inauguration of the Southern Reginal Post Graduate Training Centre and the simultaneous introduction of the M.V.Sc., course were a milestone in the history of the Madras Animal Husbandry Department. The celebrations were inaugurated by no less a person than our Governor, Sri Bishnuram Medhi, on 4th September 1958 which was attended by the elite of Madras including Sri M. Bakthavatsalam, Minister for Food and Agriculture and Sri P. P. I. Vaidhyanathan, I.C.S., Secretary of the Ministry of Food and Agriculture. Dr. F. D. Wilson who was in charge of the decorations was highly praised and congratulated upon for the glamorous illumination which added to the glory and grandeour of the function. Though our Director, Dr D. Pattabiram, who could not possibly attend the function due to sudden indisposition, our revered Minister for Veterinary Sri M. Bakthavatsalam, who had always been generous to our college, addressed us on the occasion. It was an occasion which enhanced the status of the staff and students of the college altogether in the eyes of the public. We keenly felt the absence of our former Principal Dr. Bertie A. D'Souza during the celebrations who had been responsible for the successful introduction of the course and the centre. It was again quite appropriate that the inauguration took place under the guidance of our present Principal the closest colleague and friend of Dr. Bertie A. D'Souza.

The establishment of the Regional Training centre in Madras had already begun to yield good results and we gladly received the first instalment of valuable instruments and equipment and innumerable books, to aid and facilitate the course by the munificence of the T.C.M.

Further Dr. F. D. Wilson, Dr. K. P. Chandrasekharan Nair and Dr. M. S. Ganapathy, have left for the United States for higher studies to stabilize the staff of our college and the personnel of the new born research centre in the near future.

But all the same, the attraction towards our course does not seem to be as great as it ought to be. A considerable proportion of the students who join the course every year drift on to some other before long. After all there is no inherent defect in the profession as such. In fact the role of the veterinarians in the country at large and in the plans is none too meagre. Sri M. Bakthavatsalam, our Minister, once stated "Rinderpest has been completely eradicated from our State". I wonder whether any other Department has received such a complete and concrete appreciation of its work from a respected minister of the Government.

This definitely tells us that the defect is external to the course and profession. This is an era of economic materialism and the spirit of competition in its clearest manifestation "the substitution effect" as it is generally explained by the modern writers, has reached its pinnacle today. Every individual likes to substitute for his belongings what his neighbour has and will appreciate in him. So naturally the disparity or inequa-

lity between the veterinarian and his closest neighbour the Physician in our state must be having some influence in the young and promising minds of students who face the task of selecting their course. I think any attempt to narrow, if not obliterate the small disparity and the resulting handicaps of the veterinarian will ultimately work to the improvement of the course, profession and the Department. It gives great delight and encouragement to find out that our government has already been showing great consideration to proposals in this direction.

" If winter comes can spring be far behind ".

* * * * *

Inspite of long hesitation I am afraid I will be failing in my duty if I do not make the remark that the response towards the call of the annual from the M.V.Sc. students is not as it was anticipated by the younger members of the college and I hope that in the coming years they also will co-operate in bringing up the magazine, I am sure their guidance will surely add to the standard and status of the annual as they are the persons who have faced more problems than others.

The ban on foreign imports affected us also. Hence we were not able to procure better quality of paper for bringing up this Annual.

* * * * *

We wish to record our deep appreciation of some of the achievements of our students.

1. Sri Inderjit Singh is the first student to secure six medals in 1958.
2. Mr. V. Visvanathan has been elected as Joint-secretary in the city college council.
3. Mr. Md. Ghousulla has represented the University Boxing team for four years in succession.
4. Our Hockey team is the Runners-up of the Stokes shield for two continuous years.

* * * * *

It is my pleasant duty to thank Dr. I. D. Mantramurti and the Editorial Board for their valuable suggestions, and Sri M. Anantharaman for making our work light.

Acknowledgments

It is with deep sense of gratitude we thank the following :

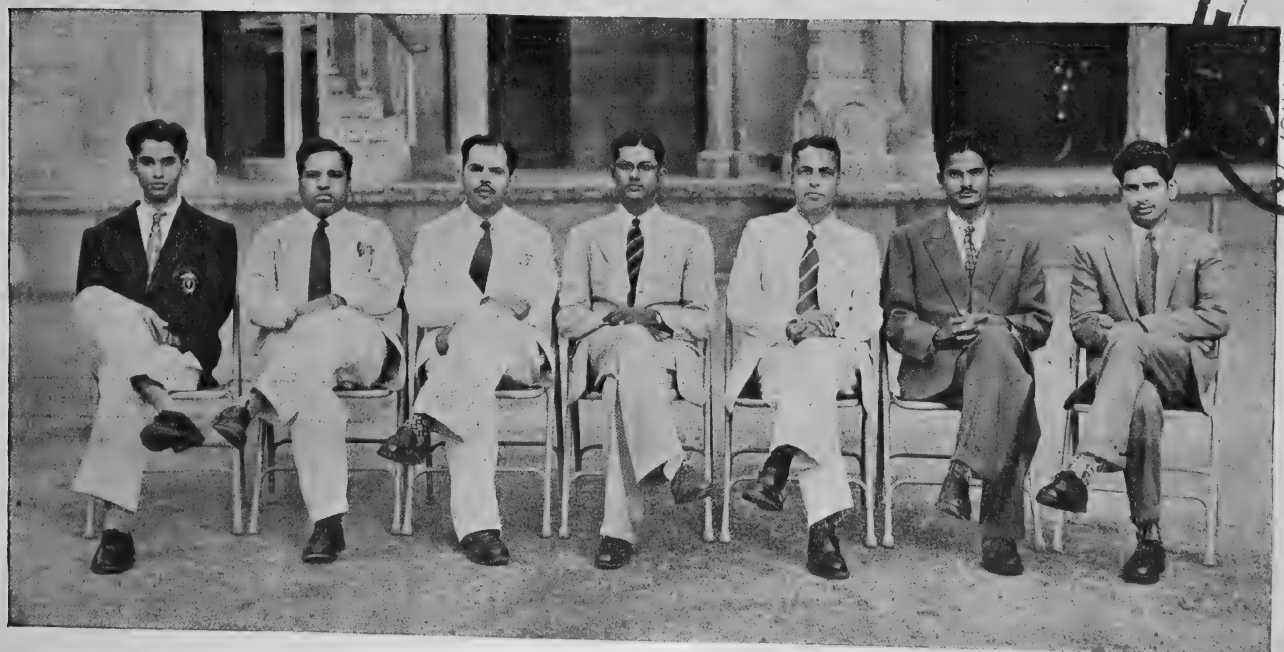
The Staff and Students who helped us by their valuable suggestions and contributions.

Sri Jambulingam, the College Artist for the photographs and drawings.

M/s. Klein & Peyerl for the Excellent Blocks they have given us.

All the advertisers who responded promptly.

Madras Veterinary College Annual—Editorial Board 1958—'59



Left to Right : Solaimalai, A., *Associate Editor*; Dr. Velayudhan Nair, C. K., *Adviser*; Dr. Chandrasekharan Nair, K. P., *Vice-President*; Dr. Mantramurti, I. D., *President*; Sri Anantharaman, M., *Adviser*; Visvanathan, V., *Student-Chairman*; and Balraj, D., *Editor*.

Sri R. Venkataraman, Minister for Industries, presents the Inter-collegiate Savings trophy to Sri S. A. Joseph of our College

Principal's Report

I HAVE great pleasure in presenting to you the Annual Report of the Madras Veterinary College for the academic year 1958–59.

The college re-opened on 1st July, 1958 after summer vacation. Most of the college students having completed their intensive period of practical farm training re-joined duty on the re-opening day.

Results : Out of the 82 candidates who appeared for the B.V.Sc., Final Examinations in June, 1958, 44 passed out with a percentage of 54 whereas in the supplemental examinations held in December 1958, 35 out of 39 candidates passed out successfully reaching a record percentage of 90.

Admissions : The Selection Committee constituted by Government interviewed candidates during the month of July both for the Pre-professional and B.V.Sc., Degree Courses and completed the work by 30–7–1958.

1. *Pre-professional Course*: Out of the 189 applications 186 applicants were called for interview and 83 candidates were selected out of the 142 who appeared for the interview. But only 75 boys and one girl belonging to Madras State joined the Pre-professional Course. In addition, two candidates deputed by Government of India, three from Mysore and one from Kerala were also admitted to the Course, leaving open the remaining seats for Andhras.

For lack of accommodation and other facilities the Government have decided to run this Course temporarily in the city colleges this year also. The Course for the men students is being run in the Loyola College and the Course for women students in the Queen Mary's College. We thank the authorities of these colleges for their kind co-operation.

Class	Madras Boys	Madras Girls	Andhra	* Kerala	Mysore	Jammu & Kashmir	Pondicherry	Orissa	Bihar	** Govt. of India	Total
I year B.V.Sc.	101	4	22	2	...	4	1	...	...	2	136
II year ,,	88	...	19	2	4	4	...	...	...	1	118
III year ,,	76	2	24	...	7	.	1	..	...	1	111
IV year ,,	54	...	15	2	1	2	...	...	...	1	75
M.V.Sc.	8	1	5	1	1	...	...	1	1	..	18
Total	327	7	85	7	13	10	2	1	1	5	458

* The figure shows only the students deputed by the Kerala State.

** All the students deputed by the Government of India belong to Malava.

2. *B.V.Sc. Degree Course :* Out of the 154 applicants 124 candidates were interviewed by the Committee and actually 49 were admitted to the Course in addition to 31 students who passed the Pre-professional examinations. Subsequently 9 more candidates belonging to the State were taken in the vacancies made available by those to whom a certain number of seats were reserved. Thus in all 58 local candidates and 31 Pre-professional students were admitted to the Course this year. The remaining seats were filled up by students from other States and those sponsored by the Government of India.

The College therefore commenced working with 458 students on the rolls as shown in the previous page :

Accommodation : The College that was originally constructed with modest objectives to train only a few students, could not accommodate this increased number without rapid expansion in the building programmes. Realising the urgent necessity for expansion, the State Government sanctioned Schemes for remodelling the existing buildings with additions wherever possible. With a liberal grant from the Government of India and unstinted support from our Government an additional hostel block with necessary amenities to accommodate 250 students, with separate quarters for the Warden at a total cost of Rs. 9·8 lakhs has just been completed. A three storeyed building costing about Rs. 8·9 lakhs for accommodating four separate departments is also nearing completion. A new building at a cost of about Rs. 25,000 to accommodate the modern X-Ray apparatus purchased at a cost of Rs. 30,000 has also been constructed. Government have also graciously sanctioned a further sum of Rs. 17·5 lakhs for the construction of additional buildings for the Regional Post-graduate and Research Centre.

Courses of Study : In addition to the Pre-professional Courses run in the Loyola and Queen Mary's Colleges for Pre-veterinary students and the B.V.Sc. Degree Course of 4 years and a term conducted in this college the following Courses are run in our college :

1. *Post-graduate Course leading to M.V.Sc., Degree :* With a view to provide in India a high standard of Post-graduate training, the Joint Indo-American team on Agricultural Research and Education recommended that four of the existing State Veterinary Colleges in India should be developed into strong centres of Post-graduate Education on a regional basis for imparting training in various fields of Veterinary Science leading to M.Sc., and Ph.D., Degrees. Accordingly the Government of India selected the Madras Veterinary College as one of the Regional Centres of Post-graduate Education. With the concurrence of the Madras University, a two year Course of P. G. training leading to M.V.Sc. Degree was instituted in the College on 4th September, 1958 and the Centre was inaugurated by no less a person than the Governor of Madras. Due to lack of space and fully qualified staff, it was decided to train candidates only in two groups admitting 18 candidates in all, 9 for each group reserving 50% of seats for students from other States. In all, 75 applications were received and they were examined by the Committee constituted for the purpose and 18 candidates were selected in consideration of merit, service and academic, record, etc., of which 9 candidates were from Madras State and the rest from Andhra Pradesh (5), Mysore (1), Orissa (1), Bihar (1), and Jammu & Kashmir (1). No application was received from Kerala State at the time of selection, but subsequently they requested for a seat and it could be complied with in a vacancy caused by the withdrawal of the candidate from Jammu & Kashmir. All the 18 candidates are undergoing the course at present.

2. *Stockmen Course :* With a view to produce a cheaper agency to fill up the existing gap, the short term course of 11 months' duration for training Stockmen is being continued for the fourth year in succession. As many as 1204 applications were received and as usual, the selection of the candidates for admission to the Course was made by a Committee who selected 200 candidates for admission for the three Centres viz., 100 for Hosur, 50 for Pudukkottai and 50 for Orathanad.

3. Flaying Course : In order to train amateurs and butchers in the art of scientific flaying with a view to reduce the loss of revenue due to faulty flaying of skins and hides, a short duration flaying course is being run in this college for the sixth year in succession. During the year under report, 36 amateurs and 16 butchers have been trained and 24 more butchers are now under training. 39 Extension Officers were also trained and nine more are under training.

4. Refresher Course for the Extension Workers : On the recommendation of Government of India a refresher course for the instructors in Animal Husbandry and Veterinary Science and Extension Officers in Animal Husbandry in N.E.S. and C.P. areas was conducted in this college, in order to keep them posted with the developments in their field and also to enable them to function more efficiently in their respective areas of work, on a regional basis. Altogether 15 officers, 2 from Madras, 5 from Kerala and 8 from Mysore were trained.

5. Post-graduate Diploma Course in Veterinary Parasitology : The last batch of students of the All India Post-graduate Diploma Course in Veterinary Parasitology passed out of the college early in the year.

Scholarships : Five scholarships of Rs. 40/- per mensem are available for award to deserving Scheduled caste and Scheduled tribes and other socially and educationally backward classes, for each year of the B. V. Sc., Degree course, excluding those awarded by the Harijan Welfare Department and the Government of India.

The students of the Scheduled castes and Scheduled tribes and socially and educationally backward classes, who are undergoing the Stockmen Course, are also paid stipends, the former at the rate of Rs. 35/- each per mensem and the latter at Rs. 30/- each per mensem.

Students undergoing the Flaying Course are also paid stipends. The value of the stipend is Rs. 25/- per month, if held by amateurs and Rs. 10/- per mensem in the case of butchers.

Prizes and Medals : The following are the Endowments available in this college for the award of prizes and medals for the encouragement for the learning of Animal Husbandry and Veterinary subjects in this college :

1. Dr. R. Swaminatha Iyer Memorial Prize for Surgery. ... Rs. 2,000
2. Sri N. Kullamma Naicker of Neikkarapatti Estate Prize, for Dairy Science. ... 2,000
3. Sir Dorabji Tata Prize, for the alround best student—by Sir Dorabji Tata Trust. ... 3,000
4. Rao Bahadur P. Swaminatha Iyer Prize, for Genetics—by the Madras Race Club. ... 3,000
5. Dr. A. Srinivasan Prize in his name being administered by the Principal, Madras Veterinary College. ... 2,000
6. Dr. Panikkar Memorial Fund —award of a medal. ... 2,000
7. Dr. and Mrs. Ratnam—Award of a medal to Final Year student ranking first in the subjects of Medicine and Surgery put together. ... 2,500

8. Dr. Wilson award of Prize for Meat-Inspection. ... 2,000

These endowments valued at Rs. 18,500/- with the University have now relieved us of that heavy feeling which used to creep in for want of prizes to be awarded to deserving students of our Faculty at the University Convocation until now.

Staff: Though we are happy to announce that some of our staff members have been deputed for higher studies in American Universities, no Principal can be happy over frequent changes of staff especially when equally well qualified men are not available to fill up the gaps for long periods.

Sri Bertie A. D'Souza continued to be the Principal and Professor of Hygiene till 2-9-'58 and proceeded to U.S.A. on deputation for higher studies under the Inter-institutional exchange programme.

I took charge of the post of Principal and Professor of Hygiene from Sri Bertie A. D'Souza.

Sri K. N. Govindan Nair, Vice-Principal and Professor of Physiology deputed for higher studies in U.S.A. returned to Madras in August 1958 and resumed his duties as Vice-Principal and Professor of Physiology in this college on 16–8–1958.

During the period under report, Sri M. N. Menon, Professor of Surgery was relieved to take up a similar appointment in the Kerala State. Sri F. D. Wilson, Lecturer in Flaying was appointed Professor of Surgery in this vacancy. Consequent on the appointment of Sri F. D. Wilson, Professor of Surgery, Sri R. H. Sundaram, Assistant Lecturer in Flaying was appointed Lecturer in Flaying. Dr. V. Mahadevan, Professor of Animal Nutrition was relieved of his duties on his accepting the post of Head of Animal Nutrition Section at the Indian Veterinary Research Institute, Izatnagar.

Sri M. C. Chellam, Deputy Director of Animal Husbandry (Key Villages) on other duty as Regional Sterility Officer on termination of the scheme took charge as Professor of Gynaecology and Obstetrics.

Sri B. Venugopal, Lecturer in Chemistry was relieved on 2–8–58 to join the M.Sc., Degree course at the Madras University. Sri V. Satchidanandam, Assistant Lecturer in Physiology was temporarily appointed as Lecturer in Chemistry in view of his additional degree in Chemistry.

Sri G. Venkataramana, Assistant Lecturer in Agriculture, Agricultural College, Coimbatore, assumed charge of the post of Lecturer in Agriculture with effect from 4–6–58. Messrs M. Ranganathan and M. N. Dhandapani, Assistant Lecturers were appointed Lecturers in Medicine and Surgery respectively in the two additional posts created for increased admissions.

On the introduction of the Post-graduate Degree Course in this college early in September, 1958 the following staff have been appointed to hold the upgraded posts sanctioned under the Scheme :

1. Dr. C. N. Stark, Ph. D., (T. C. M. Expert) *Professor of Dairy Science.*
2. ,, M. Dharmarajan, M.A., Ph.D., *Professor of Genetics.*
3. ,, V. Ratnasabapathy, B. V. Sc., Ph.D., *Reader in Genetics.*
4. ,, V. Mahadevan, M.A., D.Sc., *Professor of Nutrition.*
5. ,, G. Venkatachalam, B.Sc., M.S., Ph. D., *Reader in Nutrition.*
6. Sri K. P. Chandrasekharan, G.M.V.C., B.V.Sc., *Professor of Pathology.*
7. ,, S. Damodaram, B.V.Sc., M.Sc., *Reader in Pathology.*
8. ,, G. Balasubramaniam, G. M. V. C., B.V.Sc., *Lecturer in Pathology.*
9. ,, M. Anantaraman, M.A., M.Sc., *Professor of Parasitology.*

10. Sri V. S. Alwar, B.V.Sc., M.Sc., *Reader in Parasitology.*
11. „ S. Vancheeswara Iyer, G.M.V.C., M.S.
    Dr. U. K. Menon, B.V.Sc., D.Sc., *Professors of Bacteriology.*
12. Sri B. Narasinga Rai, G.M.V.C., B.V.Sc., D.T.V.Sc., *Reader in Bacteriology.*

Consequent on the appointment of Sri M. Anantaraman, Research Officer, Helminthology as Professor of Parasitology for the M.V.Sc., Degree Course from 1—9—'59, Sri M. V. Sankaranarayanan was appointed Research Officer, Helminthology and consequent on the appointment of Sri V. S. Alwar as Reader in Parasitology, Sri D. A. Victor was promoted as Lecturer in Parasitology. Consequent on the appointment of Sri S. Damodaram, Additional Lecturer in Anatomy as Reader in Pathology, Sri A. Lakshminarasimhan, Assistant Lecturer in Anatomy was promoted as Lecturer in Anatomy and Sri V. K. Seshadri as Additional Lecturer in Anatomy in the vacancy caused by Sri D. Mariappa who has been deputed to U.S A. for higher studies.

The following officers have been temporarily promoted against the posts shown below during the period under review :

1. Sri R. D. Michael, *Lecturer in Hygiene.*
2. „ S. K. Balakrishnan, *Lecturer for Stockmen Course.*
3. „ R. A. Balaprakasam, *Lecturer in Bacteriology.*
4. „ S. G. Natarajan, *Research Officer, Mastitis and*
5. „ V. Venkataswamy, *Lecturer in Genetics.*

Training : The following officers have been deputed to the U.S.A. for higher studies under the Inter-institutional exchange programme :

1. Sri Bertie A. D'Souza to Tennessee.
2. „ D. Mariappa to Kansas.
3. „ F. D. Wilson to Kansas.
4. „ M. S. Ganapathy to Kansas and
5. Sri K. P. Chandrasekharan Nair to Missourie.

Sri P. Subramaniam, Assistant Lecturer of this college continues to be on extra-ordinary leave pursuing Post-graduate studies in U.S.A. during the period under report.

Sri K. N. Govindan Nair returned from U.S.A. after taking an M. S. Degree in Physiology from the University of Tennessee.

Research : The facilities offered for Post-graduate research work leading to the M.Sc., and Ph.D., degrees of the University of Madras are being availed of both by the staff and students. Systematic research on various problems on Animal Husbandry is being carried out by every member of the staff in addition to their normal duties and fifteen of them are working for higher Post-graduate degrees. Four scholars, two sponsored by the Govt. of India, one under the Cultural Scholarship Scheme of the Government of India and one from Bihar are undertaking research for the M.Sc., degree of the Madras University.

Research programmes to co-ordinate the field workers with the college staff are being pursued by the research officers, Mastitis and Helminthology. Other heads of Departments also go to the districts for investigation whenever necessary.

The Hospital : The college has a well established hospital which has recently been reorganised into small and large Animal Clinics with Medical and Surgical Units in the former and Medical, Surgical and Gynaecological units in the latter making provision for both in and out-patients with a view to extend prompt and efficient service to the public. The response from the staff has been good and the public appreciation is admirable. It is hoped that with the additional buildings under construction and posting of sufficient staff to this hospital to fill up the existing vacancies, these clinics are sure to cater to the

needs of every animal-lover more than ever before.

All the departments are fairly well equipped with modern apparatus, instruments and appliances so much so that it occupies a unique position in the matter of Veterinary education, research and treatment of the diseased animals. Equipment to the value of 12,000 dollars have already been received through T.C.M. and another list for 60,000 dollars have also been approved recently. The college operation theatre and the X-ray unit are so modernised as to bring them on a level with any first rate institution.

During the period under review, as many as 16,212 cases were admitted in the college hospital with 901 operations which go to mean that we treat in this hospital on an average of 142 cases a day.

The shoeing forge maintained by the college continues to do good work in sound instructional purpose to the students besides attending the animals that are brought for shoeing. In all 524 animals, mostly horses have been attended to in the forge during the year.

Laboratories: As many as 14,727 specimens were received from the hospital sections and field for diagnostic purposes and in the various laboratories attached to the college and the results were communicated to the parties promptly. This shows the amount of extra useful work the staff of the college are expected to do in addition to regular teaching and systematic research.

Livestock: The college maintains a demonstration poultry unit not only for teaching purposes but also to meet the demand for eggs and birds for experiments. Feeding trials, transmission experiments, curative and prophylactive measures are undertaken in this Unit. It is worthy of mention here that during the period under report more than 12,000 eggs have been collected, out of which 1054 chicks were hatched out, 1262 eggs were sold for setting, 545 eggs supplied to different sections for experimental purposes and the rest sold to the public for table.

In addition to this poultry unit, three horses, three bullocks, three cows, four calves, and one ram are maintained in this college for instructional purpose, in addition to 12 breeding bulls maintained for insemination work, both natural and artificial.

Library: Greater facilities are made available in the College Library day by day. Nearly 507 books, 160 periodicals and 160 pamphlets have been added to the Library during the year. We are extremely thankful to the T.C.M. authorities for their generous gift of 490 volumes and the British Council for ten volumes. Books and periodicals worth 12,298 dollars are expected to be supplied by the T.C.M. during the year.

The Library is kept open from 8 a.m. to 8 p.m. on working days and from 1 to 6 p.m. on holidays to enable students and staff to make best use of the available literature. The ticket system has been introduced since January, 1959 and it has facilitated the free flow of books and their safe return. Special lighting and seating arrangements have been made with a separate lounge for members of staff.

Extra-curricular activities: My report will not be complete if I do not tell you of the lively interest that our staff and students take in all our extra-curricular activities. Though most of the details are published elsewhere in the college annual, a few of their achievements are worthy of repetition.

1. *The Madras Veterinary College Association:* I am really proud to report that under the enthusiastic Student Chairman, V. Viswanathan and the untiring Secretary, Anthony Doss, the year 1958–59 has been the most eventful and busiest so far as the activities of the Association are concerned.

Dramatic trophy: It is worthy of note that

our college boys staged a drama "Kathalvibathu" during the "Cultural Week" and won the Inter-Collegiate trophy for the best drama among city colleges.

Our College Association is affiliated to the Madras College Students' Council, Madras Students' Adult Education Council, Madras College Social Service League, United Nations Students' Association, All India Veterinary Students' Association and to the World University Service. You may be surprised to hear that our students hold very responsible positions in various organisations.

1. Sri V. Viswanathan, *Joint Secretary, The Madras College Students' Council.*
2. „ P. J. George, *Executive Member, International Students' Association, Madras.*
3. „ M. Arokiasamy, *Editor and Member for Publication, Oversees Students' Association, Madras.*
4. Sri Shaari Bin Ishak, *President, Malayan Association, Madras.*
5. „ S. Indrasekharan, *Sports and Games Secretary, Malayan Association, Madras.*
6. „ S. S. Rama Rao, *President, Advisory Board of Andhra Vidyarthi Vignana Sammithi, Madras.*
7. „ Ch. Chandra Rao, *Treasurer, Andhra Vidyarthi Vignana Sammithi, Madras.*

As it is not possible to give details of all their varied activities, the programme of some of the important events are tabulated below for your information. The Chairman and Secretary deserve our congratulations for their good work in organising meetings, discussions and debates day after day and week after week, with a view to give ample opportunity for every one to think, speak and debate on a platform.

Date	Purpose of meeting or subject discussed	President	Speaker
1958			
17th July	General-body meetings and election of office bearers	...	...
5th Aug.	Inaugural Address	Sri B. A. D'Souza	Dr. U. Krishna Rao
11th „	Magic performance by Professor Rajasekar	...	...
14th „	Cycle tour round the world by a student from Switzerland.	...	...
15th „	Independence Day	Sri B. A. D'Souza	Prof. M. Rathnaswami
20th „	Graduates' Reception and Variety entertainment	Sri B. A. D'Souza	Dr. Thomas W. Simons American Consul General
28th „	Farewell party and Reception to staff members	Sri V. Viswanathan	J. Anthony Doss.
8th Sep.	Inauguration of the Tamil Section	Sri M. C. Chellam	Sri C. Rajagopalachariar
4th Oct.	Wild Life Day	Sri I. D. Mantramurti	Sri M. V. Krishnappa, Union Dy. Minister for Food & Agriculture.
11th „	Inter-class Debate in Tamil	...	...

Date	Purpose of meeting or subject discussed	President	Speaker
13th Oct.	Veterinary Education	Sri I. D. Mantramurti	Dr. I. D. Wilson, T.C.M. Expert from Izatnagar
20th „	Inauguration of the United Nations Students' Association and Inter-Collegiate debate in English (13 Colleges participated)	Sri M. Kandaswamy, President, United Nations Students' Association.	Sri T. Chengalvaroyan, Ex-Mayor of Madras
23rd „	Inter-class Competition in Tamil.	...	...
24th „	United Nations Day	Sri I. D. Mantramurti	1. Dr. P. V. Cherian, Chairman of Madras Legislative Council. 2. Dr. E. J. Long, Group Leader, T.C.M.
17th November	Literary Festival.		
19th „	Inter-collegiate debate in English.		
20th „	Inter class quiz in English.		
24th „	Inter-collegiate debate in English (16 colleges participated.)		
1959			
19th Jan.	Reception to Mr. Frank Alexander, West Indies Cricket Captain.	...	...
26th „	Republic Day Celebrations	Sri K. N. Govindan Nair	Sri P. P. I. Vaidyanathan I.C.S., Secretary to Govt. Food & Agriculture.
31st „	Veterinary Education	Sri I. D. Mantramurti	Dr. N. D. Peacock, Campus Administrator, T.C.M. Tennesse.
9th Feb.	Veterinary Education	Sri I. D. Mantramurti	1. Dr. E. E. Leasure Dean, Faculty of Veterinary Science, Kansas. 2. Dr. Gleason, T.C.M. Delhi.

Excursions: To break the monotony of college work it was necessary to take the students and staff to places of educational interest, during week ends and other approved holidays. Excursions to the following places were thoroughly enjoyed by everybody:— Integral Coach Factory, the Bird Sanctuary at Vedantangal, Pakshitheertham at Thirukazhikundram, Seven Pagodas at Mahabalipuram, a trip to the All India Radio Broadcasting Station, Madhavaram Milk Colony, Corporation Sewage Farm, Red Hills Reservoir, Salvage Farm at Alamadhi and the Poondi Reservoir.

1. *Film Shows:* Two film shows by the Courtesy of U.S.I.S. and one by the Tourist

Dr. Bertie A. D' Souza,
Principal,
who is undergoing training in U.S.A.

Dr. Govinda Nair,
Professor of Physiology,
Recently returned from U.S.A.
after qualifying himself for M.S. Degree

Sri Bishnuram Medhi, Governor of Madras, inaugurates the
Southern Regional Centre of Post graduate Education.

Our Professors in U.S.A. under T.C.M.

Dr. D. Mariappa,
Professor of Anatomy

Dr. F. D. Wilson,
Professor of Surgery

Dr. M. S. Ganapathy,
Professor of Therapeutics

Dr. K. P. Chandrasekharan Nair,
Professor of Pathology

Information Service and one by the courtesy of the Tea Board were well attended and highly appreciated. We thank the authorities concerned.

2. *The Madras Veterinary College Athletic Association:* The College teams took part as usual in the Inter-collegiate competition and came out runners-up in the Hockey knock-out tournament for the Stokes' Shield, having lost narrowly only to the holders. Even this I think is a great credit to a college where playgrounds are not fit for regular practice all the year round. Md. Ghousulla of Final Year was selected as a member of the University boxing team this year.

3. *The Staff Club:* met three times during the year in spite of frequent transfers of members and lack of suitable accommodation.

4. *The Clinical Club:* Is a purely students' organisation which arranges for periodical discussions and symposia on interesting clinical topics. During the year under report seven meetings were held the details of which are published in the college annual. The noteworthy feature of the club this year is the great enthusiasm shown by the Clinical staff and the Post-graduate students whose observations and suggestions are highly appreciated by the student members.

5. *The Planning Forum*: The inaugural address was delivered by Dr. D. Pattabiraman, the Director of Animal Husbandry on 25—8—'58. The National Plan Day was celebrated in a fitting manner on 13—9—'58 when Dr. S. Chandrasekharan, Director, Indian Institute of Population Studies spoke on 'some aspects of Economic Planning'.

Small Savings Trophy: In the City Small Savings Campaign organised by the Regional National Savings Office, the staff and students of the college collected Rs. 2345/- in all and won the small savings trophy. The individual cup was also awarded to Sri S. A. Joseph, a final year student of this college. It is hoped that the college will work harder this year and retain the trophy.

6. *The Social Service League*: Continues to function as usual concentrating its efforts in the adjoining slum area.

7. *The Tamil Sangam*: Efforts have been taken to form a Tamil Sangam this year and the inaugural address was delivered by Sri C. Rajagopalachariar. A new feature of this year's activities was the grand way in which Pongal Day was celebrated in the college and hostel.

Discipline: We insist on good behaviour and strict discipline, of course permitting the students to have their own freedom when they really deserve and I am glad to announce that our students never took undue advantage of the freedom that was made available to them and in fact their conduct and character during the period have been, if I may say, so exemplary.

Evaluation of Students' Progress: While our aim is full attendance and punctuality, we are pleased to note that absence from classes and 'proxies' are fast disappearing. An evaluation committee has also been constituted for each class in order to watch the progress of the students in attendance and also to assess their merit in studies and good conduct. It is gratifying to receive reports from heads of departments that there has been cent percent attendance in most classes during the last few months and almost all the students appeared for their terminal examinations in December. I am glad that the students have realised their responsibilities and have put their heart and soul in an atmosphere of study and serious work which is indeed very encouraging. I wish to tell my students to-day how pleased I am with their ready response to every call made on their sense of discipline and how earnestly I expect them to strengthen the structures of good order and gentlemanly behaviour upon which the reputation of this

college stands. It is this change in the college atmosphere that has been mainly responsible for such a high percentage of passes in the B.V.Sc., final examinations held in December, 1958.

Visitors: There have been quite a good number of distinguished visitors both Indian and Foreign during the year as may be seen from the report of the Madras Veterinary College Association. Needless to say that all of them without exception were impressed with the rapid allround development of the college and the expanded facilities available for proper treatment, training and research.

The Credit for the year's good work goes to the members of the staff who have been readily extending their whole-hearted co-operation in all our undertakings and new enterprises. The way the students have responded to the call of responsibility and discipline is praiseworthy. This sort of happy family understanding between the Principal and the staff, the teacher and the taught has not only increased the tempo of students' progress, but is sure to heighten the prestige and reputation of this institution.

Civilization is a limitless Multiplication of unnecessary necessaries.

—*Mark Twain.*

Real joy comes not from ease or riches or from the praise of men but from doing something worthwhile.

—*Sir Wilfred Grenfell.*

The highest reward for man's toil is not what he gets for it but what he becomes by it.

—*John Ruskin.*

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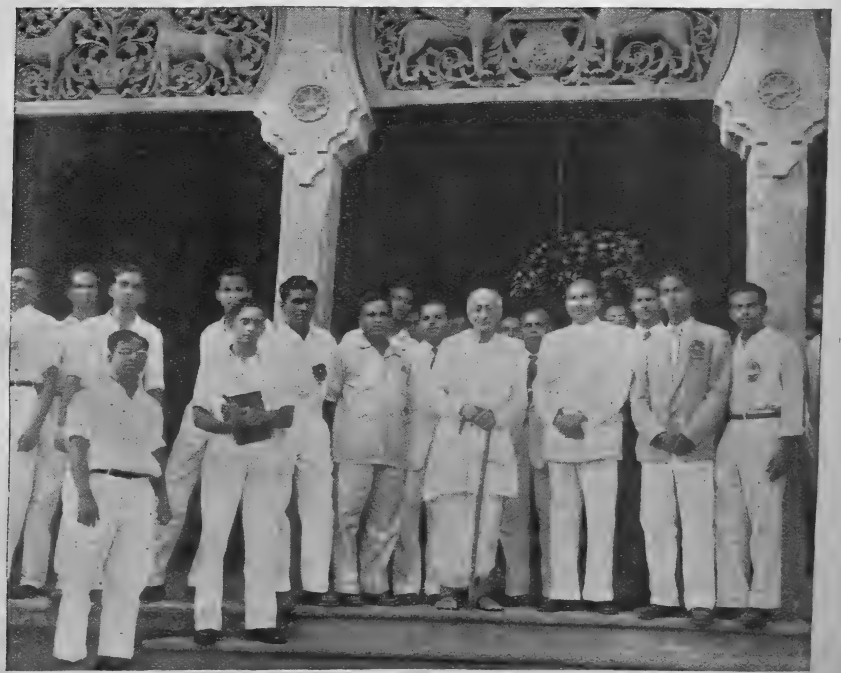
Dr. Franz Alexander, F.R.C.V.S. (Skipper of West Indies Cricket Team) addressing our Staff and Students



Sri C. Rajagopalachariar with our Students during the inauguration of Tamil Section of our College Union

Our Operation Theatre for small animals

College Ambulance for large animals

The Growth of Veterinary Education in Madras State

Dr. I. D. Mantramurti, G.M.V.C., B.V.Sc.,
Principal, Madras Veterinary College

WORSHIP of the cow in India can be traced back to prehistoric times. Animals received considerable attention appropriate to those days and the veneration for the cow has been handed down through the centuries. It is clear that the importance of livestock in human welfare was much appreciated even in the early days of Indian history.

The need: In the British era, the stud farms which they established were looked after by men from Britain since 1774, as there were no Indians who were qualified veterinarians. Even those persons, who were imported from Britain, were mostly unqualified. History reveals that qualified veterinarians from Britain were made available in India only in 1808. This led to the establishment of an Army Veterinary Department in India in the year 1827. These veterinarians devoted their attention mostly to the study of tropical diseases affecting the army horses, but nothing however important resulted by their study. It was only after the advent of some of the outstanding veterinarians in 1850 that an Army Veterinary School was established at Poona in the year 1862, mainly to train persons for the army Veterinary Department. Soon it was realised that attention should be paid to the cattle population also, since the diseases affecting cattle were very poignant and sudden in their devastating effects, ultimately paralysing the food position. This resulted in the Government of India appointing the "India Cattle Plague Commission" in the year 1869, to focus their attention on the preservation of livestock. Among the various recommendations of the Cattle Plague Commission, the Establishment of a Civil Veterinary School to train Indian agriculturists was one. Accordingly the first Civil Veterinary School was established at Babugarh in the year 1877 with the medium of instruction in Urdu. Since then there was great demand from various States for qualified Indian veterinarians and the first Indian Veterinary College in English was established at Bombay in the year 1886. Then followed Bengal with English as medium of instruction while Lahore and Rajaputana started the Veterinary Colleges with Urdu as the medium of instruction.

The Civil Veterinary Department, Madras, which was inaugurated in the year 1892 for rendering adequate Veterinary aid in the Madras Province, could not progress well on right lines due to paucity of trained personnel. Hence the immediate need for an Institute of Veterinary Education was fully recognised for getting properly trained personnel to undertake work for bringing the under-developed animal industry to its proper status.

The beginning: In the year 1900, a conference of Veterinary Experts in the country was held at Ambala to formulate a suitable curriculum of studies for Veterinarians in the country and accordingly the Madras Government opened an Institute of Veterinary Education with the medium of instruc-

tion in English on 1st October 1903 with 20 students, in a rented building, which was subsequently named " College ". Experience revealed that for the efficient teaching of Veterinary Science and also for affording facilities to the students for having clinical practice, a Veterinary Hospital attached to this educational institution was necessary and since the rented building could not be provided with all facilities the erection of a permanent building in Vepery High Road, which was considered to be a fine piece of architecture, was constructed and the College moved to its new premises. Since then the hard task of producing trained veterinary personnal to meet the needs of the times was entrusted to this college. How well this institution has discharged the duties entrusted to her is a matter of history ! In surveying the long history of this college, we have to place on record the unforgettable services rendered by its early pioneers, who had nursed the institution with care and devotion and also pay our tribute to those illustrious men of this college, who had contributed so much to the building up of the profession.

The Diploma Course: To start with, the veterinary course at this college spread over a period of 3 years and the students were examined *viva voce* by the Board of Examiners appointed by the then Inspector-General, Civil Veterinary Department, Madras, and awarded a Diploma after the final examination. On the recommendation of the Royal Commission on Agriculture, a revision of the curriculum of studies was made in the year 1930–31 and adopted at this college.

Affiliation : One of the important events in the history of the college is its affiliation to the University of Madras in the year 1936. This was the first Veterinary College in India to be affiliated to the University conferring the degree of Bachelor of Veterinary Science. Consequent on the introduction of the B.V.Sc., Degree Course, the syllabus and curriculum of studies on Veterinary Science were revised and the minimum qualification for admission to the B.V.Sc. Degree Course was made Intermediate in art and Science. Even after the B.V.Sc., Degree Course was introduced, the Diploma Course of three years' duration continued to function at this college. In 1938, the duration of the Diploma Course was extended to four years laying more emphasis on Animal Husbandry subjects and simultaneously the duration of the Degree Course was also extended to five years, both being run concurrently. In the year 1946—47, with a view to have a uniform curriculum of studies in India and as recommended by the Indian Council of Agricultural Research the duration of the Degree Course was curtailed to four years and one term the Diploma Course being abolished.

Livestock Inspectors' Course: A short course of 2 years' duration designated as the Veterinary and Livestock Inspectors' Course was started in the year 1948. These personnel relieved veterinarians of their routine duties in the field and helped the Veterinary Assistant Surgeons to concentrate on important problems relating to livestock development. When about 250 Veterinary and Livestock Inspectors were made available, this course was abolished in the year 1953.

Stockmen Course: After a year, when more veterinary personnel were needed it became imperative to provide a cheaper agency. Accordingly a " Stockmen Course " of 11 months' duration was introduced in the year 1954. Students admitted to this course were given a working knowledge in the subjects of Veterinary Science with special emphasis on Animal Husbandry. This Course continues to be conducted now at the Livestock Farms at Hosur, Pudukkottai and Orathanad, where 200 students are admitted annually, with eight months' training at the Livestock Farm

and three months' training at the Madras Veterinary College.

Flaying Course: A Flaying Course of three months' duration, with a view to adopt better methods of flaying so as to reduce the economic loss through faulty flaying of hides and skins, was started at this college in the year 1954. This course seeks to train professional flayers and also Veterinary Assistant Surgeons who in turn would train flayers in the districts.

Post-graduate facilities: Specialised skills and techniques of livestock improvement have formed landmarks in the progress of civilization as in other activities. The objective in veterinary education is to produce forward-looking men able to apply a broad-based general education and specialised knowledge for the improvement of livestock wealth. Education forms the very root of improvement and highly qualified and experienced teachers who are specialists engaging themselves in research in their own lines are required now. With this objective in view, this college has given a lead to other colleges in India in the field of higher veterinary education. It is the first college in this country to afford facilities both for teachers and post-graduate students to undertake post-graduate research work in various fields of Veterinary Science and Animal Husbandry leading to the award of Research Degrees, M.Sc., Ph.D., and D.Sc., of the University of Madras. Till now six M.Sc. and three Ph.D. Degrees have been awarded in the Faculty of Veterinary Science of the University of Madras. About 20 persons have at present registered for the M.Sc. Degree and are pursuing their research in this college.

Post-graduate Institute: In addition, with a view to provide in India a high standard of post-graduate training similar to that obtained in other countries, the Joint Indo-American Team on Agricultural Education and Research which toured the country has selected this institution by virtue of the already existing facilities, as one of the four colleges in the country for developing post-graduate education and research on a regional basis. Accordingly the post-graduate course leading to the Degree of M.V.Sc., was inaugurated in September 1958 at this college by Sri Bishnuram Medhi, Governor of Madras. At present eighteen students, nine from this State and nine from other States have joined this course in various subjects of Veterinary Science.

Refresher Course: This college also conducts, as and when necessary, post-graduate Refresher Courses for graduates employed in the Animal Husbandry Department of this State with a view to put them abreast of modern developments in Veterinary Science and Animal Husbandry.

In order to overcome the shortage of trained personnel in the field of Parasitology, a post-graduate Course in Veterinary Parasitology was conducted at this College from 1955 to 1958 with a grant-in-aid from the Indian Council of Agricultural Research, when students from this State as well as other States were trained under this Course.

Women admitted: It may be noted with interest that for the first time in the history of this college, lady students were admitted to this college for the B.V.Sc. Degree Course in 1948, the first of whom graduated in the year 1952. So far nine women graduates have passed out from this college.

Hostel facilities: With the addition of the new block, the hostel attached to the college provides residential accommodation for 370 students of this college.

The clinics: At present the college has a well-equipped Hospital with different wards for both in-and out-patients, an operation theatre with X-ray and Physiotherapy facilities and a Laboratory with modern equipment and appliances for the

proper diagnosis of clinical cases. This affords excellent training facilities for students of Veterinary Science. The presence of different breeds of cattle, the poultry unit where exotic breeds of poultry are maintained, and the Artificial Insemination Section afford ample opportunities for training in Animal Husbandry. In the field of control of animal diseases, the position of this college has been unique. From its very inception, the college, besides teaching, has bestowed time and attention on diagnostic work, research and investigation on animal diseases of economic importance. Thus the college is not only a teaching institution of the Madras University, but is also a National Research Institute for Animal Husbandry in the economy of stock-owners and the agriculturists and in the solution of the food problem. It continues to be the light and guidance for the future plans of development of Livestock and the Centre of Research. The history of this college cannot be said to be buried in antiquity. It is contemporary history which most of us belonging to the veterinary profession have lived together with this institution. What makes it of interest is not its length, but its crowded hours of glory and its work in the cause of dumb animals and the economic welfare of the poor ryots of our country.

DO YOU KNOW?

(1) That the ideal method of feeding phosphates to animals (under controlled water supplies) is through their drinking water.

(2) That chicken litter based on absorbents such as oat straw may contain up to 4·8 per cent nitrogen or 30% protein and therefore valuable in the feeding of cows and other ruminants.

(3) That a calf should be getting atleast 4 lb. a day, two in the morning and two in the evening of whole milk, the maximum intake being limited to 1/10 of its body weight.

(4) That the damage caused by "Hard Pad" or Nervous Distemper is usually of a permanent nature and that it is best to put such a dog out of its misery.

(5) That abcesses may be a secondary infection from tick bites.

(6) That the condition known as "perosis" or slipped tendon in chicken is caused by a mineral imbalance of the ration with a high phosphorus and low magnesium content.

(7) That the best time to teach a parrot to talk is as soon as it leaves its nest.

—*I. D. M.*

Notes of Parasitological Interest

V. S. Alwar and C. M. Lalitha,
Department of Parasitology

SOME interesting observations made in the Department of Parasitology are recorded hereunder. *Fasciola gigantica* was found as an erratic parasite in lungs, ruminal wall and duodenum of a heifer calf; *Microfilariae* were observed in the peripheral blood of elephants; *Trypanosoma evansi* was noticed in a mongoose.

Ectopic Foci of Infection with Fasciola gigantica: Though *Fasciola hepatica* has been recorded in abnormal situations as blood vessels, lungs, subcutaneous tissue, brain, orbit and intestine of the definitive host in other countries, records of the occurance of *F. gigantica* as an erratic parasite in similar situations are not many. In India Srivastava (1939) recorded *F. gigantica* in the lungs of goats. A similar record in a sheep (Fig. 1) was made at Madras in 1942. Subsequently these parasites were encountered in lungs ruminal wall and duodenum besides bile-ducts and gall-bladder of a cross-bred heifer aged two years. The carcase of this animal which was received for post-mortem was in poor condition showing oedema of the jowl. The lungs were highly emphysematous and revealed a few haemorrhagic patches in which the flukes were present. The liver was slightly enlarged and fibrotic. It revealed haemorrhagic streaks on the peritoneal surface. The bile-ducts were thickened and revealed calcification in some places. Large number of liver flukes was present in the bile-ducts and gall-bladder. The wall of the latter was oedematous and revealed papillomatous growths internally. The omentum was adherent to the rumen at one place and a fluke was found in the ruminal wall in that area which was haemorrhagic. Duodenum contained a large number of flukes and the duodenal mucosa was ulcerated (Fig. 2). The post-mortem picture indicated a massive infection. The adult worms were comparatively small in size and measured 1·8—2·8 x 0·7—1·0 cm. with an average of 2·3 x 0·8 cm. About 40% of the flukes were immature.

Microfilariae in the peripheral blood of elephants (Elephas maximus): Smears from the auricular blood of an elephant (Laxmipathi) aged 12 years revealed unsheathed microfilariae (Fig. 3). It had extensive cutaneous bleeding nodules on the under surface of abdomen. Smears of the blood oozing from the nodules also contained unsheathed microfilariae. The elephant showed a slight rise of temperature ranging from 98° to 99·8°F (normal 97° — 97·4°F) every evening and night for more than 1½ months. Subsequently auricular smears from another elephant (Ilangovan), a new captive aged eight years manifesting cutaneous haemorrhagic nodules all over the under surface of the abdomen revealed unsheathed microfilariae. Later we were informed that the auricular blood of one more elephant (Chandramouli) aged 19 years also revealed microfilariae on wet film examination. It

was also suffering from haemorrhagic filariasis. All the three elephants were males and were owned by a private individual at Vettaikaranpudur, Coimbatore district.

As microfilariae had not so far been encountered in the auricular blood of the elephants in this country a detailed study of these microfilariae was made. The microfilariae measured on an average 134 x 5 μ. The distances of the visible fixed points from the anterior extremity were as follows: Nerve ring 30 μ; Excretory pore 44 μ; Excretory cell 93 μ.

There are three records of microfilarial infection in elephants and they were made by Evans and Rennie (1910), Vanden Berghe (1937) and Ramanujachari and Alwar (1954). The microfilariae *(F. elephanti)* observed by Evans and Rennie in the peripheral blood of Indian elephants in Burma measured 180 x 6 μ. Khalil (1922) suggested that they might be the larval forms of *Parabronema* (quoted by Baylis, 1939). The microfilariae *(Microfilaria loxodontis,* larvae of *Loxodontofilaria loxodontis)* described by Vanden Berghe in the blood of an African elephant in Belgian Congo measured 200 x 5 μ. Those met with by Ramanujachari and Alwar in the blood from the cutaneous haemorrhagic nodules of Indian elephants at Madras measured 250 x 10 μ. The measurements of the microfilariae from the auricular smears studied by us do not tally with those described so far from elephants. The larval forms in the smears from the nodules of the same two elephants were similar to those already described from the elephants of the forest department by Alwar and Lalitha (1958). Recently a fair number of microfilariae was detected in the auricular smears of the elephant Laxmipathi; but these forms were comparatively longer (Fig. 4) and looked like those seen in the smears from nodules. Investigations to find out whether the smaller as well as the larger forms found in the peripheral blood and those that occur in the discharge from cutaneous nodules are from the same parent filarid or from different filarids are in progress.

Trypanosoma evansi in Mongoose (Herpestis edwardi): A mongoose looking apparently healthy caught in the college compound revealed teeming trypanosomes in its blood. As it was an interesting observation a detailed study of the haemoflagellate was made in the stained smears. The morphological features of the trypanosome were found to agree with those of *Trypanosoma evansi*. The blood from the mongoose was injected into a white mouse, a white rat and a guinea-pig. All these experimental animals took up the infection and died after a course similar to that of *T. evansi*. The previous observation of *T. evansi* in a mongoose was by Bronzini (1953) who described a strain of *T. evansi* from *Herpestis ichneumon* got from Somalia. The authors are of the opinion that the mongoose caught in the college premises might have got the infection by ingesting materials from carcases of laboratory animals died of experimental infection with *T. evansi*. The course and pathogenesis of the infection in mongoose on experimental innoculation with *T. evansi* are under study.

Acknowledgments:—The authors have great pleasure to thank Dr. Roy Mack, Assistant Director, Commonwealth Bureau of Animal Health, England for the literature on trypanosomes in mangoose, Sri. A. T. Venugopalan, Veterinary Assistant Surgeon in-charge, Veterinary Hospital, Vettaikaranpudur for the materials from elephants and Dr. H. D. Srivastava, Head of the Division of Parasitology, Indian Veterinary Research Institute, Izatnagar for the suggestion to record the observations on *F. gigantica*. The authors' thanks are also due to Sri I. D. Mantramurthi, Principal for the permission to record the observations.

Fig: 1. Lung of sheep with *F. gigantica insitu*

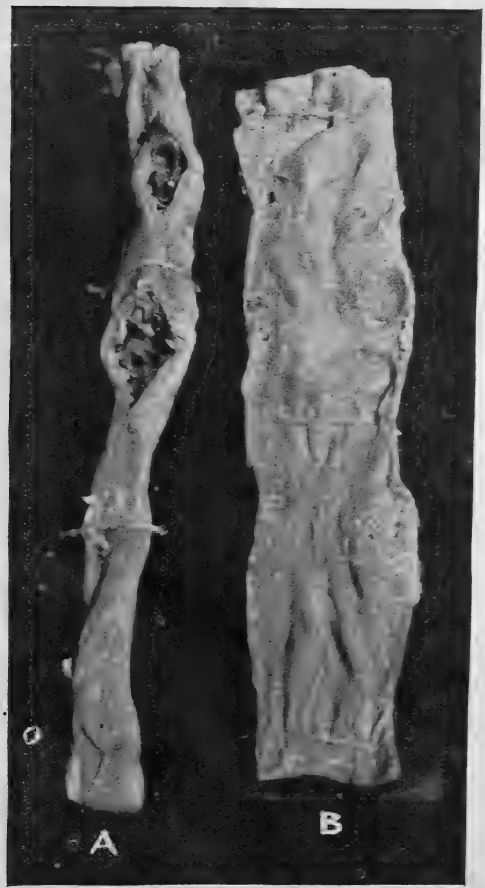
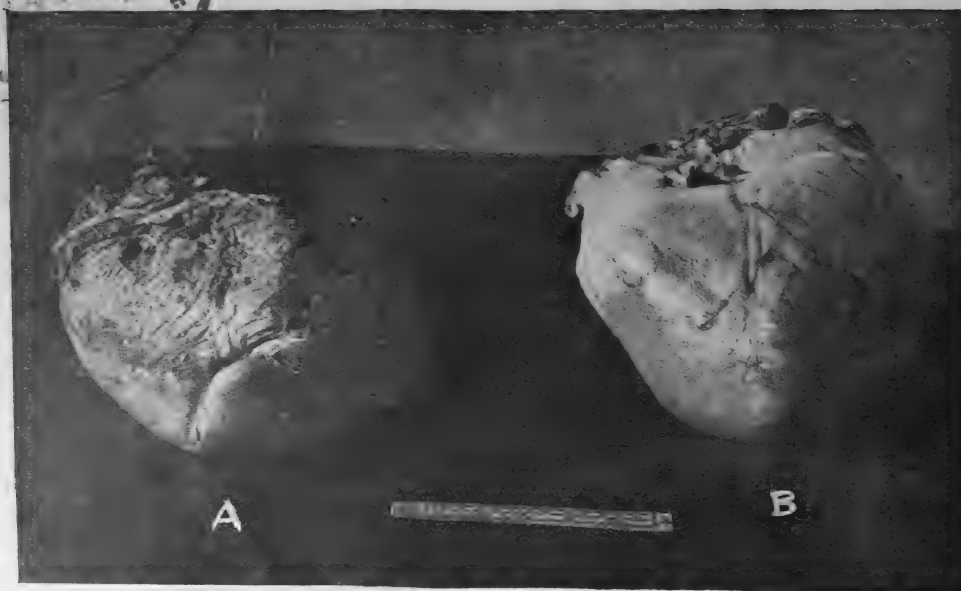


Fig: 2. Duodenum of heifer showing *A*:—*F. gigantica insitu*. *B*:—Ulcers caused by *F. gigantica*.

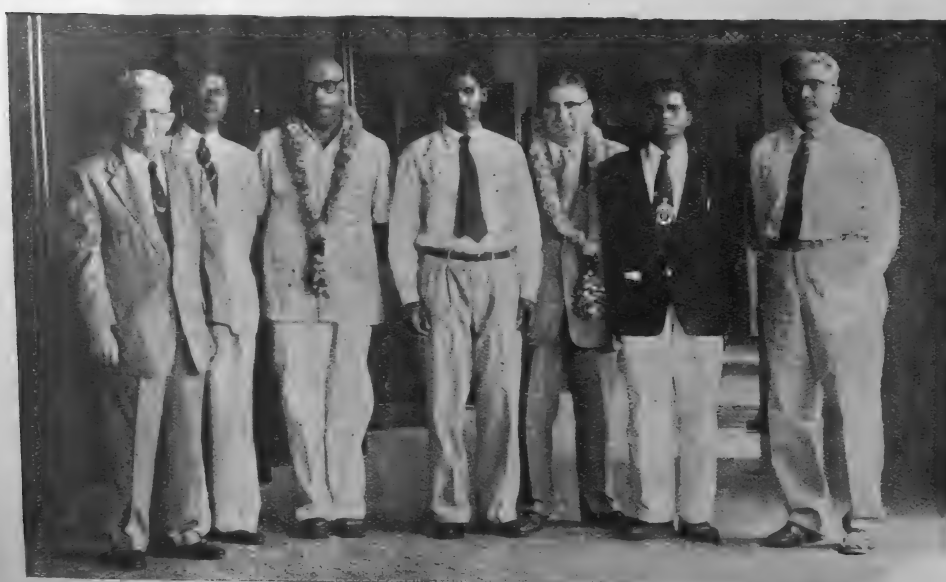
Fig: 3. Photomicrograph of the smaller form of microfila in the peripheral blood of elephant × 450.

Fig: 4. Photomicrograph of the larger form of microfilaria in the peripheral blood of elephant × 450.

An Anomolus Equine Heart



A. Apex of the heart bent medially and directed upwards B. Normal heart—Horse



Dr. P. V. Cherian and Dr. E. J. Long with our Principal and others on the United Nations' Day celebrations

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(Abst.) *Hel. Abst., 6,* 34 (No. 74c)

An Anomalous Equine Heart

S. Damodaran, G.M.V.C., B.V.Sc., M.Sc.,
Department of Pathology

ANOMALIES of the heart are exceedingly rare in domestic animals. A specimen described here was noticed in the course of examination of 100 equine hearts of which 30 were dissected after formalin-fixation and the rest examined in the autopsy room.

The heart was obtained from an aged horse that was destroyed. It weighed 3·25 Kgms. The apex of the left ventricle was broad and presented an unusual folded appearance. It was bent medially and was lying against the right longitudinal groove (Fig. 1 see opposite page) with the tip directed upwards.

In this specimen, the second ventral branch from the right coronary artery was very prominent. It was large in calibre and descended on the wall of the right ventricle, parallel but slightly lateral to the anterior border of the heart and ramified on reaching the lower third of the ventricular surface. A similar prominent anterior marginal branch was not observed in the other equine hearts that were dissected.

The two moderator bands in the right ventricle were well developed and showed slight branching. The largest was a flattened band, 1·2 cms. broad and 0·8 cms. thick. It extended from the ventricular septum to the base of the lateral musculus papillaris. The two moderator bands in the left ventricle were slender, highly arborescent and the largest was 0·2 cms. wide and 0.1 cm. thick. The moderator bands of the right ventricle are usually better developed as the muscular wall is thin and hence more liable for over-distention which the bands tend to prevent. However, in this specimen the moderator bands in the right ventricle were considerably hypertrophied and were nearly double the size of those seen in other specimens.

Comment: There was no visible evidence to account for the apical malformation and is therefore considered to be a developmental anomaly.

The hypertrophy of the moderator bands is due to dilatation and hypertrophy of the right ventricular wall consequent on the reduction in the calibre of the left ventricle as a result of the apical malformation.

Ipomea Carnea—a Green Manure cum Fodder Plant

R. Venkatakrishnan,
Research Scholar in Animal Nutrition

INTRODUCTION: Green manure plants are propagated by the Agricultural Department of our State as one of the methods of feeding the nitrogen starved soils of our state for increasing production at a quick phase. The selection of plants of manural value as well as of fodder value should be advantageously done so that they not only serve to supply certain amount of green fodder for our cattle which are equally starving for want of pasturage but also increase nitrogen content of soil. The plant Ipomea carnea is one found to serve these dual purposes.

Ipomea carnea can be grown on the bunds of paddy-fields as perennial shrub which can stand repeated lopping thereby yielding greater foliage. They grow well in altitudes below 4000 ft. Its resistance against draught and absence of adverse root effect on the adjoining crop are some of its qualities.

Botanical Description: A slender twine, leaves ovate with cordate base. Inflorescence-cymose, flowers-glaborous, corolla-pink. Flowers at all seasons except during the dry period.

Propagation: Is by planting stem cuttings. From a small nucleus, it can be developed in every village in two years time. It is interesting to note that at Koilpatti, a ten mile length of hedge of Ipomea carnea was developed in the course of a year with a nucleus material obtained from one head load of cuttings.

Nutrient Composition: These plants were brought from Papanasam village of Tanjore District and were grown at our college fodder plots.

The leaves of Ipomea carnea being found palatable to cattle and goats were analysed for the nutrient constituents.

Table I Chemical Composition.

	Constituents.	% Composition.
1.	Moisture	82·14
2.	Dry matter	17·86
3.	Total ash	9·90
4.	Insoluble ash	0·28
5.	Crude protein	28·07
6.	Crude fibre	12·61
7.	Ether extraxtives	3·77
8.	N. F. E.	45·65
9.	Calcium	0·99
10.	Phosphorous	0·11

Note: items 3 to 10 are expressed as % of Dry matter.

Discussion: From its content of crude protein (28·07%) and nitrogen free extractives (45·65%) it can be considered as a good quality fodder plant for our cattle. The absence of any toxic side effects when consumed in large quantities suggests that it is a safe fodder plant for cattle and goats.

Summary: Ipomea carnea, a green manure plant having a fodder value for cattle and goats is described. The chemical analysis of the leaves is presented.

Thanks are due to The Professor of

Animal Nutrition and the Principal, Madras Veterinary College for their encouragement in this work.

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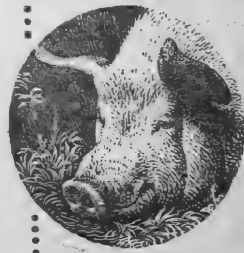
By Mayurananthan, B.A.

THE GROUP was discussing dogs "A friend of mine" one man said, "had an intelligent dog. One night my friend's house caught fire, and instantly all was confusion. My friend and his wife flew for the children and bundled them out in quick order. Everyone was saved—but old Rover dashed back through the flames. Soon he reappeared, scorched and burned—but what do you think he had in his mouth? The fire insurance policy, gentlemen—wrapped in a damp towel!"

—ILLUSTRATED WEEKLY

For small or

LARGE animals



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How Dairying in India can be Improved

Clement William, B.V.Sc.,

M.V.Sc. Class

(Notes prepared for discussion in Dairy Science Class of the M.V.Sc. course)

INTRODUCTION: Milk and milk products which constitute an essential part of human diet need necessarily be produced, handled and marketed in the most ideal way. There are several aspects of the milk problem which demand a thorough investigation on the part of the practical scientist, the practical sanitarian, the sociologist and the legislator. India is in need of a thorough organisation along modern lines. With a change, for good, in the customs and habits of the people, enlightenment of the ignorant and illiterate farmers and the milk vendors and improvement in the sanitary and legislative control, the day is not far off when our country will keep pace with the tremendous headway made by the other countries in dairying.

Present Position:—(1) Milk: In the Indian Union there are 60 millions of adult cows and she buffaloes, out of about 200 million cattle, producing 40 billion lb. of milk per year. (As against 22 millions of adult cows producing 123 billions of milk per year in the U.S.A.) Of the total milk that is produced in India i.e., 7,447 lakh maunds, 49·1% is produced by white cattle, 47·5% by buffaloes and 3·4% by goats. About 4% of the zebu cows and 5·9% of buffaloes are found in urban areas and approximately they produce 4·7% of the total milk. 95% of the milk producing animals of India are owned and maintained in rural areas. Nearly 60% of India's milk is converted into ghee. Average per capita consumption of milk per day in India is 2 ounces (as against 2 to 3 lb. in the U.S.A.) Average production of Indian cow is 600 lb. a year.

(2) Feed: The following table gives the present availability of cattle feed in the country, indicating that there is a great shortage:

Feed	Requirement	Availability	Percentage of Availability	Remarks
Concentrate	40·28 million tons	13·76 million tons	34	...
Roughage	932 „ „	768 „ „	82	including green grass available for grazing
Digestible protein	...	...	23	...

Aim of Improvement: (1) To increase the yield of milk per cow (2) to provide proper collection, storage and marketing facilities.

(1) *Increasing the yield of milk per cow*: This is of primary importance in making the dairy industry to flourish and be profitable. This

can be achieved by (a) careful breeding (b) feeding and (c) management.

(a) Breeding : Dairy breed must be evolved purely for milk production as there can be no useful dual purpose breed. Proven sires should be imported to grade up the so called milch breeds of the country. Frozen semen imported from such proven sires should be widely used in all the artificial insemination centres.

As the large number of poor milk yielding cattle increases, the cost of milk production also increases, and hence, they should be replaced by high yielding dairy cattle. It has been found that 62 herds of cattle of 30 cows each yielding 30 lb. a day will give more milk than what 11,184 milch cows of Madras State will give.

(b) Feeding : Cattle with potentiality for higher milk production cannot exhibit their qualities in full unless they are reared on a proper plane of nutrition. Inspite of our short resources, the milk yield of our cattle can be substantially increased by feeding them judiciously following economic and scientific principles. One of the quickest ways to increase the milk production is by utilizing our fodder and concentrate resources in a better way by providing cows economically balanced ration.

The following factors will aid in effective utilisation of the available fodder :

1. Good pasture—cheap and economical feed.

2. Legume grasses—(a) Their protein correct the deficiency in cereals. (b) Excel in vitamin A content. (c) Maintain soil fertility.

3. Ensiling—No wastage of fodder.

4. Chaffing—Better relished and fully utilised (there is 30% loss without chaffing.)

5. Washing dry fodder—Oxalate removed and aids calcium assimilation.

6. Preparation—Crushing, boiling, soaking aids better utilisation and hence better return.

7. Tree leaves—Neem, Tamarind and Rayan tree leaves are rich in nutrient and mineral content. (Neem leaves contain 10% digestable protein and 79% T.D.N.)

8. Vegetable leaves—Cabbage, cauliflower. Rich in protein, nutritious and well digested.

9. Use of oil cakes—Not as manure but as cattle feed.

10. Concentrate mixture—should be devised for all areas based on local feed stuffs, taking into consideration the nutrients, availability, price and digestibility.

11. Conserving feed—By disposing low producing cows and the graded male stock and utilising that feed for dairy cattle.

By bringing the feed to the cows double the number of them can be fed, than allowing them to the feed (as labour is cheap in India it is possible.)

(c) Management : In addition to hygenic housing, exercise, trimming of hoves and horns particular attention should be paid to the following :

1. Length of productive life of cow, should be about 5 years (and not 20 years or more).

2. Regularity in feeding, milking etc. The periods between milking should be made as uniform as possible.

3. Breeding routine : cow should be bred to conceive on the 75th to 110th day after calving.

4. Dry period : should be 40 to 45 days for older cows and 70 to 75 days for younger cows.

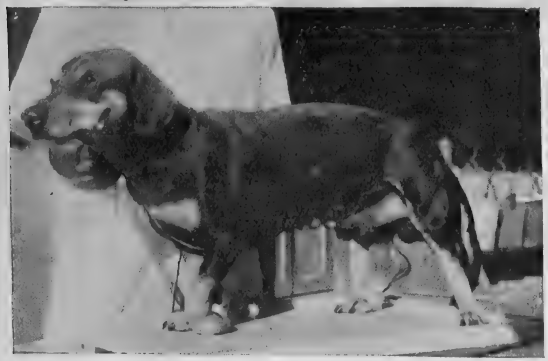
5. Feeding in proportion to yield : 1 lb. of concentrate for each 3 lb. of milk for cows and 2·5 lb. of milk for buffaloes (in addition to the maintenance ration.)

6. Care of milk utensils.

(2) *Collection, Storage and marketing of milk :* Milk should be collected (purchased) on the nutritional vaule (fat and S.N.F.) to do away with the tendency to adultrate with water (which may occur if purchased by measurement of volume.)

House to house milking should be punished

SURGICAL QUIZ



No. 1. Before treatment

No. 1. After treatment

No. 2. Before operation

No. 2. After operation

SURGICAL QUIZ—(cont.)

No. 3. Before operation

No. 3. After operation

No. 4.

No. 5.

—*By* DR. F. D. WILSON, *Prof. of Surgery*, (For answers please see page 57)

as an offence with suitable legislation.

As it is customary to boil the milk before consumption facilities should be provided to cool the milk to increase the keeping quality instead of pasturisation.

Milk should be collected, stored and handled in bulk at convenient centres, preferably away from the human dwelling, and transported and delivered at homes, preferably in bottles.

Depending on the demand the surplus milk should be converted into various dairy products and marketed.

Conclusion :—Ignorance and illiteracy of those engaged in dairying is the primary factor for the present state of dairying in India. An effective programme to educate the milk producers on the points mentioned above is necessary for the progress of dairying in India, as any advancement in the scientific approach to dairying is not of much practical value until they understand, appreciate and adopt them. An effective agency will be by conducting cattle shows, exhibitions, film shows, village talks and discussions and folk songs through the National Extension Service schemes.

Milk recording and maintenance of records should be made compulsory.

The government should take suitable steps by legislation to maintain standards for production, storage and marketing.

Maintenance of pasture, production of silage and growing of fodder crops should be subsidised by the Government until they are popular.

A veterinary and public health department should be formed in each State to examine the milch cows, clean milk production, transport and marketing of milk.

"STATE OF VETERINARIANS IN THIS STATE"

M. AROKIASWAMY,
1st Year, B.V.Sc.

Many a heart would fail, Dear Brother,
To witness thy state rot and wither;
Soul not one there is to mind,
Years four and odd thou hast behind,
Spent well with terms so long and hard
With clinics and texts and cases and ward
Oh! Surgeon, thy profession so nice and noble
The time 's not far to rid your trouble.

True those years thou toiled and spent
To master Vet with many a supplement
Unequalled and abundant is thy knowledge
Truly many a medicine man would acknowledge.
"Thy aim is noble and reward thine,"
So says Santho our patient equine.

Though thy course abounds with texts
Triumphed thou without notes to texts.
Patience, Brother, far not 's the dawn
That chides unjust and comes to warn
Those that say that their's the best
And cannot rest until they must
Devil and Despair will not last long
When Vengeance and Truth goes mighty strong.

Surgeon! thy unjust state if known,
Would kindle Dukes Sisson's wrath unknown.
Learn O, faulty men in line
Gratitude and loyalty from canine,
Patience and hard work from bovine,
Intelligence and justice from equine.
Oh State! why thou be so ungreat
To pay the Vet his rightful rate?

Weismann's Unwiseness

Mahaboob Ali Khan,

3rd B.V.Sc.

PAST: Man tried a lot to know the origin of earth, life and that of his own after millions of years after the birth of the earth and life. Almost every religion gives an account of the origin of man and earth. But these theories are quite different from book to book and they are mere imaginations and unbelievable. In the last two centuries systematic and scientific attempts were made regarding the evolutions of man and other species. In the history of evolution two names Lamarck and Darwin are unforgettable. Everybody knows that Darwin's theory is the best one at the moment and it is unbeaten.

Lamarck, a French Zoologist, who lived before Darwin was one of the most remarkable as well as one of the most pathetic figures in the history of evolution. He contributed a lot towards understanding of the mechanism of evolution. His name is especially remembered in connection with the "Use and disuse" theory. The sum and total of his theory :—

1. The development of the organs of species depends upon the use and disuse of those organs.

2. The aquired characteristics under changed environmental conditions are inherited by offsprings.

These are mere assumptions and he could not provide any evidence for these owing to his own poverty and blindness. The second assumption is quite meagre and this inheritance of acquired characteristics has not yet proved. All these ideas met an utter failure and Lamarck received only a tardy appreciation many years after his death.

To disprove Lamarckism a famous experiment was carried out by an eminent biologist of 19th Century called Weismann. A pair of rats were taken, their tails were cut and they were mated. The tails of the mice born to this pair were also cut and mated. And this cutting of tails and mating them was carried out successively for 20 generations and there was no appreciable reduction in the length of tails in the 21st generation. And thus Weismann showed that Lamarckism was wrong.

Present: The main object of this article is to show that the so called famous experiment is improper. And this does not mean that this is an attempt to show that Lamarckism is correct. I agree that Lamarckism is wrong. But the experiment conducted to disprove it is improper. I do not know if any body else opposed Weismann and I do not think so because a book published as recently as 1954 (*Biology* by Paul. B. Weisz) still describes Weismann's experiment as a famous one. The main cracks in this experiment are duration, naturality and necessity.

It should be remembered that all these events or changes in the species are considered to have been taken place millions of years ago. Nobody saw what happened actually at that time. And all these theories of evolutionary

mechanism are nothing but logical and reasonable, imaginary explanations based on stones (fossils) and bones (skeletons) collected from various parts of the globe and logical interpretations of the shape and changes of embryo and some other things like these. The proof for these theories is not as accurate as showing a white curdy precipitate by adding silver nitrate and hydrochloric acid in a test tube. And another fact to be remembered is that the process of evolution is very very slow. Even small variations require thousands of years and thousands of generations to happen and within a short span of a man's life very very little or almost nothing can be seen. And at this point, Weismann went wrong. He continued the experiment only upto twenty generations, which hardly would have taken 10 to 15 years and perhaps expected a tailless mouse and on finding almost normal tails in the 21st generation he confidently concluded that there would not be any reduction in the length of tails (even after prolonged duration of the experiment apparently) and disproved Lamarck. I do not say that there will be production of tailless mice if the experiment is continued for thousands of years and thousands of generations. There may be a change or may not be. Nobody can say what will happen exactly. But how did Weismann conclude that there would not be any change by observing for just a few generations within a period of one or two decades ?

Another fundamental point lacking in Weismann's experiment is the equality in conditions and necessity. The environmental, climate and atmosphere conditions and temperature of the earth millions of years ago should have been quite different from that of 19th Century. If there is any change in animals it is only to suit the climatic conditions of that time. The conditions present at the time of giraffes originating from short necked antelope—like ancestors, at the time of snakes originating from reptile—like lizards which have limbs, and at the time of gorillas losing their tail should have been quite different from those at present. All these changes are due to changes in environment, due to utter necessity to the individual, due to fear for life and during the struggle for existence and struggle for food mate or fate. And these are not due to any one's (Weismann's) fun and fancy or will and pleasure. Nobody pulled the neck of a giraffe, nobody rasped the limbs of snakes and nobody cut the tails of gorillas. All due to natural forces. But in the experiment of Weismann the conditions are quite opposite to these of nature. There is no change in environment nor in climate, no necessity of losing tails to rats, no fear for life and no struggle for existence nor for food or mate. Cutting of tails artificially with an old 7 O'clok razor blade is un-comparisable with the forces of nature. One is a natural phenomenon and the other is an artificial experiment conducted under different conditions. Drawing conclusions, from such experiments, comparing them with a natural phenomenon is, at least in Lamarck—Weismann's case, improper.

I would quote, from the remarks of a biologist another instance :

" with all the knowledge and learning of parents, the child born is not able to start from alphabets ".

I do not know what this means, I also do not know how to comment on it and I even do not know how this example disproves Lamarckism if the purpose is so. With the aid of this kind of experiments, one can disprove even Darwinism. But please do not try to do that. I will disprove even that experiment.

Of course, the idea behind the Weismann's experiment can disprove Lamarck. Except for its inability to furnish natural conditions

it is really a famous experiment.

Criticism and correction of any kind will be gladly received.

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"The students, especially those studying in professional colleges should keep their knowledge ever green even after leaving their colleges. The veterinarians should work for their welfare and developments of the animal kingdom with full faith and interest."

Dr. Thomas W. Simon,
American Consul General

A Case of Filariasis in Bovines

Richard Masillamony & B. N. Souri,
Final B.V.Sc.

WE RECORD here a case of filariasis in a bullock (case No. 2502) admitted in large animal clinic with a history of having fits since ten days. Since fits due to Microfilaria is uncommon, opportunity is taken to record the observations made on this case including the line of treatment adopted.

Definition : Under the term filariasis are included morbid conditions produced by certain parasitic nematodes of the super family Filaroidea, the adults of which may live in circulatory or lymphatic system, the connective tissues or serous cavities while the larval forms termed " Microfilaria " commonly invade the blood stream or the lymph space, where they are capable of living for a considerable time without developing further. The host is not inconvenienced by their presence in the circulating blood, normally. But cases are on record where they produce fatal occlusions of end arteries such as coronary vessels and also convulsions due to the irritation in the peripheral capillary bed.

Aetiology : *Adult form :* Nematodes belonging to the family Filaridae are commonly found in the peritoneal cavity of ungulates. They are several centimeters long ; milk white in colour and taper towards the hind end which is spirally coiled. Spicules are unequal and dissimilar. Tail of female bears spines.

Larval form : The larvae occur in the blood stream. They have a long slender tail may be sheathed (e.g.) Setaria Sp. (or) unsheathed. When a thick smear is stained with Leishman's stain, we can demonstrate the sheath. A singular feature in the life of the microfilaria is what is known as *Filarial Periodicity*. Microfilaria having " nocturnal periodicity " will be seen teaming in the peripheral blood only during nights. This case is of interest because here " diurnal periodicity " was noticed. Synchronising with the appearance of microfilariae in the peripheral blood stream, the animal was observed to be showing conclusive syndrome. These larvae are transmitted by the blood sucking Arthropodes such as Stomaxys, Tabanus, and mosquitoes.

Predisposing Factors : Soil deficient in calcium and other minerals is said to be a predisposing cause. Mal-nutrition may also be a factor. Because these factors induce a lowered vitality the animal which may be normally harbouring these parasites suddenly develops systemic disturbances such as convulsions.

Diagnosis : 1. A wet film is taken early morning or during night and examined for any microfilaria.

2. A thick blood smear can be taken, stained by Leishman's method and the microfilaria can be identified under the low power of the microscope. The sheath may be demonstrated if present.

Treatment : The following is the line of treatment adopted. In this case, the microfilaria detected is an " ***unsheathed one***", seen

in a smear made at the time of convulsions. The paroysm of fits is controlled by a course of Antimosan and the microfilaria also disappeared from the peripheral blood after two injections of antimosan. The animal was kept under observation for a further period of four days during that time, the peripheral blood was negative for microfilaria. The animal showed no recurrence of fits during the period.

Case No. 2502 L.A.C./OP.
Kind of animal : Bullock, Breed : N.D. Colour : Grey
Sex : Male Age : 6 years
Owners' Name : Sankaracharya Mutt
Date of admission : 20—9—1958 Date of discharge : 4—10—1958

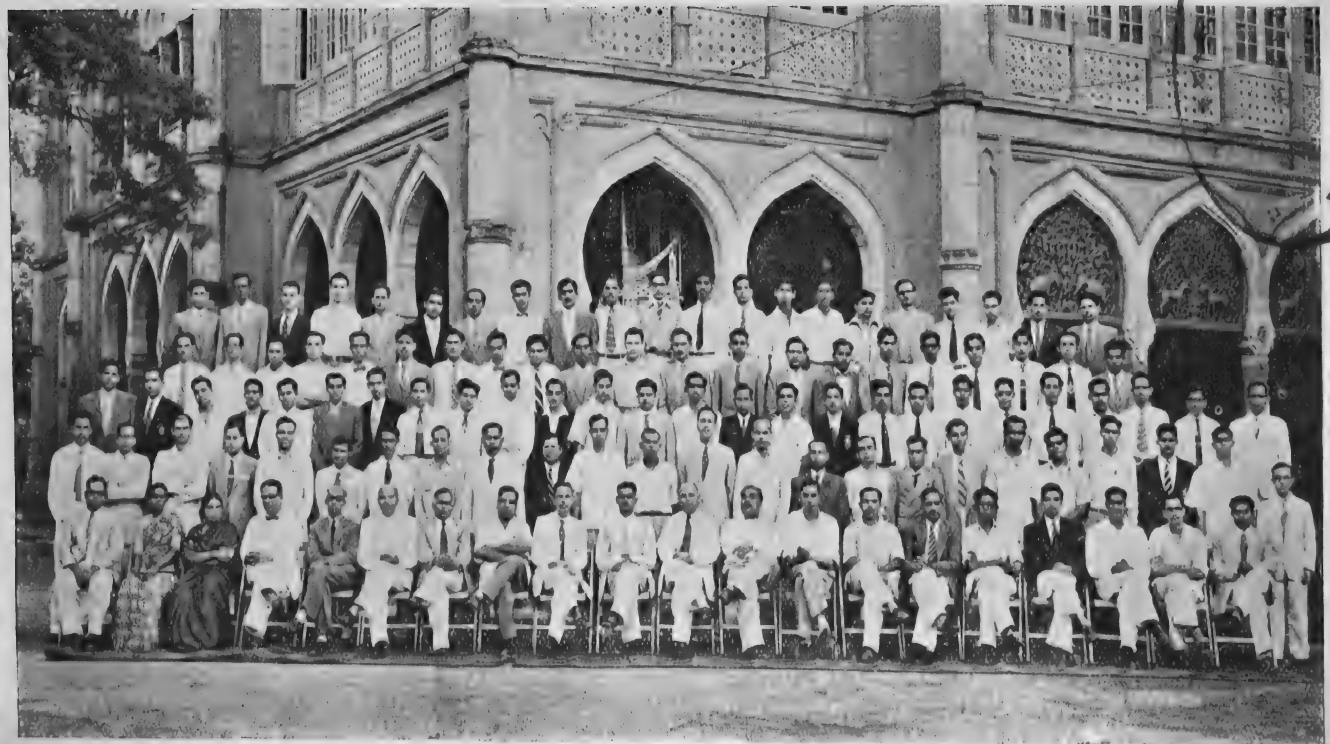
History and duration of illness.

Animal is said to be having fits since ten days.

Condition of the patient on admission.

General Condition : Fair
Heart : No abnormalities detected. Heart sounds normal.
Lungs : do.
Abdomen : No impaction or tympany noticed. Dung is of normal consistency.
Limbs : Normal. Skin : Glossy.
M. M.: Rosy Pink.
Diagnosis : Filariasis.

Date	*Observation, Treatment etc.*	*Remarks*
20–9–'58—	Temp. 102·4° F, sent blood smear for microscopical examination and citrated blood for total cell count. Animal is bright. No fits noticed. M. M, Pink and moist. Given 10% calcium borogluconas—150 c.c. Intravenously. Advised to get M.F.C. solution.	R/ Pulv. tonic 2 oz. Treacle Q.S. Ft. elect. sig. now.
22–9–'58—	Temp. 102·2°F. No fits noticed. Animal is bright and ruminating; passed dung of normal consistency. M.M. Pink and moist. Gave M.F.C. solution 100 c.c. i/v. *Result* : Blood smear no organisms could be detected. *Total cell count* : R.B.C. 5·64 million/c.m.m. W.B.C. 13,600/c.m.m.	R/ Pulv. Tonic 2 oz. Cresol 1 Drachm. Treacle Q.S. Mft. elect. sig. now.



Outgoing Graduates 1958—'59

Madras Veterinary College Clinical Club 1958—'59

24–9–'58	Temp. 102·4°F. Animal is passing loose motions. No blood or mucus seen in the dung. Repeated M.F.C. 100 c.c. i/v.	R/ Pulv. tonic 1 oz. Creta prep. ½ oz. Cresol 1 Drachm. Treacle Q.S. Mft. elect. sig. now.
26–9–'58	Temp. 102·2°F. Animal is reported to have had fits while returning back home on 24th from the hospital and the fits lasted for 15 minutes. Repeated M.F.C. solution 100 c.c. i/v. sent wet film and blood smear for examination.	R/ Soda. Salicylas 1 oz. Pot. iodide 1 Drachm. Pulv. ginger ½ oz. Treacle Q.S. Mft. elect. sig. now.
27–9–'58 to 4–10–'58	Temp. 100·6°F. The animal is hospitalised for further observation. Dung was of normal consistency and urine passed in normal quantity. Repeated wet film and blood smear examination. As the wet films showed a number of unsheathed microfilariæ and as it was suspected to be the cause of convulsions, a course of treatment with Antimosan was decided to prevent recurrence of the condition.	*Results : wet film.* Motility present. *Blood smear :* Positive for Microfilaria.

Gave Antimoson 30 c.c. S/c. During the next three days of our observation the animal had no convulsions and was ruminating and had a good appetite. However the wet film showed the presence of actively moving microfilaria and the stained blood smear also showed microfilaria.

The treatment with Antimosan was repeated on 1–10–58 and 4–10–58.

The blood was found to be free from microfilaria after the second injection of Antimosan and the general condition of the animal improved and the animal was discharged tured on 4–10–58.

Subsequent imformation elicited from the Mutt about the condition of the animal showed that animal to be in perfect health.

> " The United Nations is the only binding factor in this divided world. Exclusion of a country from United Nations will not help to preserve peace in the world. The strength of the United Nations has been increasing as more and more countries gain independence. "
>
> *Dr. P. V. Cherian, Chairman,*
> *Madras Legislative Council.*

The Story of Fanni

(Ovaro-Hysterectomy at Midnight)

Goushallah Hussain,

Final Year

FANNI a highly pedegreed Boxer bitch was rushed in a high powered car from Vellore to the Madras Veterinary College Hospital for an emergency operation on Friday 5th December, '58.

The history was Fanni had littered two pups on Tuesday 2nd December, and looked normal thereafter. But on Friday the owner an American lady, found Fanni dull and listless. She called in the local veterinarian and found that the dog was running a temperature of 104·6° F. She was also informed that Fanni had still two more dead pups within her. The Doctor advised her to take Fanni to the Madras Veterinary College Hospital for an emergency caesarian.

Fanni was brought in a cold and decumbant state by her owner at about 7 p m. when only the Resident Veterinary Officer and his assistant were present. However frantic efforts were made to contact the Chief Surgeon and finally the owner contacted him at his residence at Adyar and he was rushed to his theatre at the Madras Veterinary College. On his way he stopped at the hostel and took some students to witness or to help the operation. This is how we Final Years came into the picture.

An emergency caesarian or if necessary hysterectomy was decided upon and consented to by the owner the last one, only to save the life of the mother. X-ray taken by the Radiographer revealed two pups in the uterus.

With none of his assistants the Chief Surgeon toiled along with the Resident Veterinary Officer, a few physicians and students and after two hours Fanni was carried out (about 1 a.m.) of the operation theatre minus her Uterus and two highly decomposed pups.

All during the operation glucose saline with cardiozal was injected by the drip method. At one time just before the operation the breathing stopped during anaesthetisation for a period of five minutes. But the strong hands of the Chief Surgeon resorted to artificial respiration and the animal was soon revived.

For the next three days after operation Fanni hovered between life and death and Surgeon and Physician gallantly fought to keep her alive with brandy, glucose saline drip etc. The animal rallied round and has since been discharged.

The case is unique, in that this is the first time that a major operation done in the night has survived.

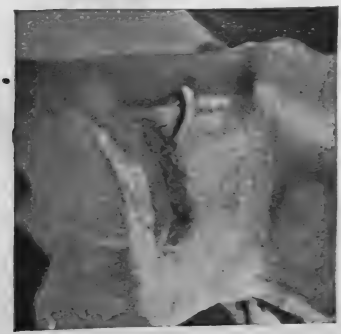
"Medical and Veterinary Department should work together for a detailed study about communicable deceases and for the rapid development of the country."

Dr. U. Krishna Rao, Speaker, Legislative Assembly.

"Fanni—The German Boxer" under post-operative treatment

Rumenotomy in a cow (Page 35)

Above : Plate I Below : Plate II



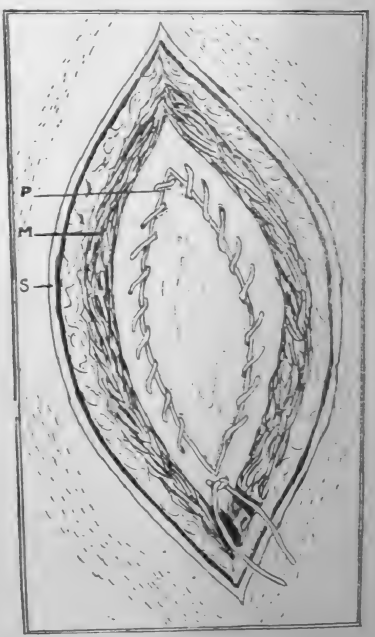
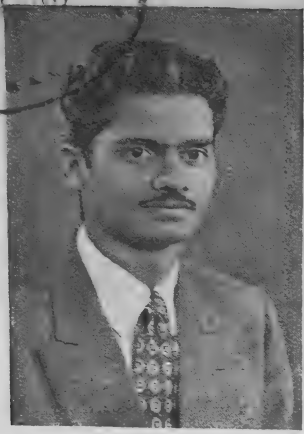
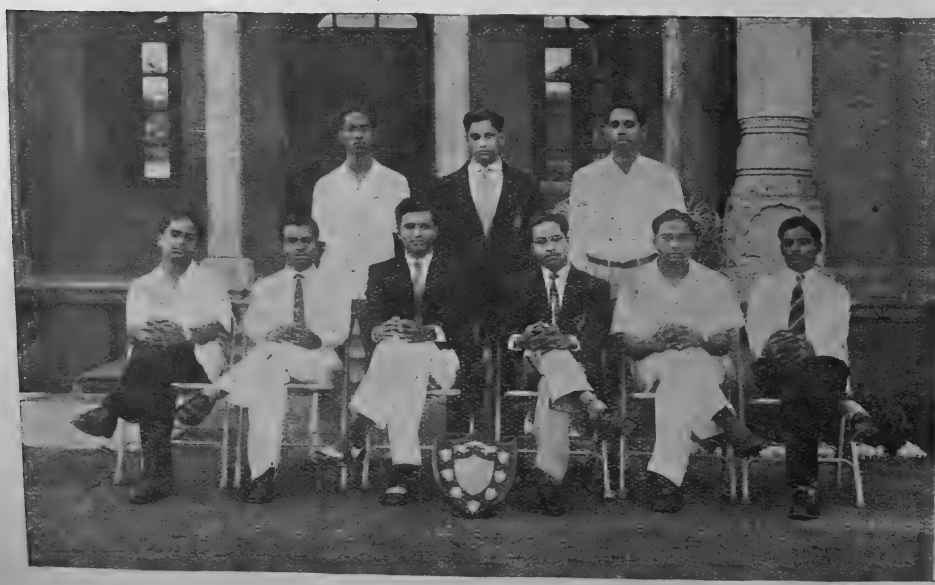


Plate III : Extra-peritoneal Suture
P—Peritoneum M—Muscle S—Skin



V. VISVANATHAN, *Student Chairman, Joint Secretary, Madras College Students' Council*

DR. INDERJIT SINGH BAKSHI, B.V.SC.
First Student to get Six Medals—1958
1 Srinivasan's Memorial Medal 2. Dr. Swaminatha Ayyar Memorial Medal 3. Rao Bahadur Dr. R. Swaminatha Ayyar Memorial Medal 4. Sir Dorab Tata's Memorial Medal 5. Dr. & Mrs. V. D. Rathnam's Memorial Medal 6. Panicker Memorial Medal.



Members of the College Dramatic group who won the Inter-collegiate Dramatic Trophy for the best drama among city colleges during the "Cultural week."

Rumenotomy in a Cow

A CASE RECORD

S. Bashir Ahmed, B.Sc.,
Final, B.V.Sc.

ON THE morning of 3rd September 1958 a cross-bred cow was brought to the Madras Veterinary College Hospital and was admitted as an out patient (C.W.O.P. 2275) with the following history.

"The abdomen of the animal was distended slightly since 2 days and last night it was highly bloated. The animal was breathing with distress with its tongue protruding outside and was having intermittent cough with mucus."

Date	*Observation*	*Treatment*
3-9-'58—8 a.m.	The symptoms shown were alarming high degree of tympany, distressed breathing and coughing incessantly. As relief was deemed immediately necessary, a probang was passed but no relief was obtained as the gas in rumen was intimately mixed with ingesta forming a frothy mass.	R/ 01. terebin thinae ½ oz Spt. Am. Aroma ticus Tr. Zingiberis Tr. Asafoetida aa 1 oz Formalin 1 Drachm 01. Arachis ad xiv ozs. M. ft. haust sig. now.
9 a.m.	As there was no relief a trocar and canula was passed into rumen from the left flank taking necessary precautions and there was an initial escape of gas, but later there was escape of only frothy fluid. To check fermentation in the rumen Formalin 1 drachm was administered through the canula. However there was no relief in breathing and the cow continued to show distress with intermittent coughing. The cow was watched till the after-noon when it was decided to perform rumenotomy to give relief.	
3 p.m.	Rumenotomy was performed.	

Preparation: The site namely left flank from about the level of the transverse processes of lumbar vertebrae, superiorly, the last rib anteriorly, to a depth of 30 cm. on level with the external angle of ileum was shaved washed and cleaned then sterilised by application of **Tr. Iodine and Harrington solution.**

Anaesthesia: An efficient local anaesthesia was established by Para vertebral block using 4% Novocain solution and 10 cc of 2% novocain I/M along the proposed line of incision.

Position: The anaesthesia and operation were carried out in the standing posture.

Technique: 10 minutes after anaesthesia an incision 20 cms long was made on the left flank at a distance of a hand breadth downwards from the transverse processes of lumbar vertebrae and 3 fingers' breadth from the last rib going through successively, the skin, fascia, abdominal muscles and peritonium. Then the cut end of the peritonium was sutured to the wall of the rumen. This constitutes extra peritonial rumenal sutures after Goetze (plate III). This prevents any accidental leakage of ruminal fluid into pertonial space during the operation thus safe guarding against peritonitis. The synthetic suture material VETAFIL (fine) was used for this purpose. The elliptical ruminal surface, exposed extra peritonially should be of hand breadth width so as to facilitate easy suturing of rumen subsequently. After packing the sides of the wound with antiseptic mops the rumen wall was incised through. All bleeding points on the cut edges of rumen wall were ligatured. The incision at the lower and upper angles extended to a distance of 2" from the extra peritonial sutures. The sides of the rumen wall and the wound were covered by a rubber sheet of 25" square with a circular window. The rumen was found to be heavily packed with frothy material. By syphonage the fluid material was removed as far as possible. Then by introducing the hand well lubricated with parachlorgel about a third of ingesta was removed. This afforded a considerable relief. Then the rumen floor and reticulum were explored carefully by hand when a ladies hair pin was detected just piercing through the reticulum and on ruminal floor 2 nails and 2 wire-pieces were found and were removed. The nails were of $1\frac{1}{2}$" length and 2 wire pieces $\frac{1}{2}$" each. After satisfying that there were no further foreign bodies in the rumen all the important organs were palpated for any abnormality namely spleen, omasum, abomasum, liver and kidneys and no significant findings were recorded. Then the rubber sheeting was carefully removed and the wound was cleaned with normal saline solution. A rumen fistula tube of 1 cm width and about 1' long was fixed in the middle of the rumen incision by a circular stitches made in a Lembert's manner; and the rumenal incision itself was closed by an ascending and discending rows of Lembert's sutures with VETAFIL (Medium). The peritonial surface of rumen was cleaned off from blood clots and an antibiotic namely (sulfacrin) was insufflated. Then the muscle wound and the skin wound were closed simultaneously by six rows of musculocutaneous sutures with sterilised silk (extra strong) The skin wound was sealed off with Tr. Benzoin Co. The case was then transferred to I.P. for further care.

7-30 p.m.	T. 101·6°	
10 p.m.	T. 102°	
4-9-'58	T. 102°F. m.m.pink. Animal was active. Animal was breathing normally without any distress. Not passed dung Urine found normal.	Given Glucose saline 10% 300 cc. I/V Diet. Gruel in small quantities.
5 p.m.	T. 102·6°	Given Streptopenicillin 1 GM with Seclopen 4 lakhs I/M.

5-9-'58—T. 102° F. Animal was bright. Passed dung in small quantities. Dung found normal. Passed urine. No cough. No discharge from nostrils. Auscultation revealed nothing abnormal. Sutures were intact. Given mild exercise.	R/ Cresol 1 drachm Sodichlor 4 oz. Pul. nuxvomica 1 drachm Pul. ginger 4 drachms Pul. chirrata 4 drachms. Treacle Q.S. *M. Ft. elect sig. now.* Given glucose saline 300 cc I/V Applied Tr. Benzoin Co. to the wound.
8 p.m. T. 103·2° F.	Given Seclopen 8 lakhs I/M
6-9-'58—T. 101·8° F. m.m. slightly pink. Animal was active. Passed dung and urine normal.	R/ Cresol 1 drachm Pul. chirrata. Pul. ginger aa ½ oz. Treacle Q.S. Ft. elect sig. now. Diet. gruel with wheat bran.
7-9-'58 to 11-9-'58	Repeated the above electuary. Diet. Gruel with bran and straw.
12-9-'58—T. 101·6° F Animal was normal in habits. Novocaine was given on the lips of the wound around the tube. Then one suture on either side of the tube was removed. The sutures on the rumen wall also removed and *ultimately* the tube was removed. Applied sulfacrin to the wound and 2 interrupted sutures were put including the skin with silk. Sealed with Tr. Benzoin Co.	R/ Novocaine 2% 30 cc sig for local use. Given rest.
13-9-'58—T. 102° Animal was altert.	Given rest.
14-9-'58—T. 101·8° F. Animal was bright and active.	Removed two sutures on the lower end of the wound. Given rest. Diet : Oilcakes to be added to the above diet.
15-9-'58—T. 102 Abdomen slightly bloated. Dung constipated slight oedema around the wound.	R/ Greseol 1 drachm Sodichlor 4 oz. Pul. ginger

		Pul. chirrata aa ½ oz. Pulnuxvomica 1 drachm Treacle Q.S. Ft. elect sig now. Diet. Oilcakes stopped. Hot fomentation given.
2 p.m.	Tympany was still present.	Given soap water enema. R/ Cresol Formalin aa 1 Drachm Sodichlor 4 Oz. Pul. ginger 2 Drachms Amm. Chlor 2 „ Treacle Q.S. Ft. elect sig now.
5 p.m.	T. 103·2°	Given Seclophen 12 lakhs I/M
16–9–'58	—T. 101° slight tympany was noticed	R/ Given the above electuary
10-30 a.m.	Tympany was more—no relief	Given Phenargan 5 c.c. I/M
4 p.m.	T. 103·4°	Given Seclopen 12 lakhs I/M
17–9–'58	—No tympany. Faeces found normal	Repeated the electuary
18–9–'58 to 22–9–'58	Animal was bright	Repeated the electuary
23–9–'58	—T. 101·8°	Removed all the sutures cleaned the wound and dressed with sulphanamide powder. R/ Acid nitro hydro chlor dil ½ drachm sig in gruel.
24–9–'58 to 1–10–'58		Repeated the dressing. Given rest.
2–10–'58	—T. 102°F. Animal was ruminating well. Wound was almost healed up	Repeated the dressing. Animal was fit for discharge.
3–10–'58	—T. 101·2°. Said to have cough during night. Animal was normal in habits. Rumenating well. Dung and urine found normal.	R/ Cough electuary 1 oz. Ft. elect sig now. Repeated the dressing.

Animal was found to be in the pink of health.

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Animal was discharged cured on 3–10–'58 at 4-45 p.m.

Discussion : The case has been recorded for two reasons. No tentative diagnosis for the presence of foreign bodies in reticulum was made before operation. As the cow was coughing incessantly and frequently putting the tongue out the ordinary methods at disposal for detecting foreign-body disease namely percussion tests on the ventral aspect of abdomen, tactile percussion of abdomen with a stick and wither grip test which depend on the pain produced were considered not useful as the cow already showing severe distress. No metal detector too was available.

The technique of extra peritonial suturing was found very useful as there was some soiling of the operation wound by the fluid from the rumen. Moreover since there was necessity for the fistula tube on account of constant fermentation and coughing, there was likely hood of escape of rumenal fluid into peritonial cavity.

Acknowledgments : My thanks are due to Sri F. D. Wilson, Professor of Surgery and to Sri V. Umamaheswaran, and Sri E. Rajendran, Assistant Lecturers in Surgery for their guidance in the preparation of this report and the principal, Madras Veterinary College for the permission accorded for the use of data from the case records.

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More Milk Production in our State

S. Ramachandran,
Final Year B.V.Sc.

THE GRIM reallty of undernourishment—assuming itself in enormous proportions, exhibiting in its furious forms as paralysing our people from manifesting their innate potentialities, choking them from expression of their native intellect, obstructing the way towards their progress and exposing them to the ravages of disease—has driven us to look to the cow, to come to our rescue. The modern discoveries in the nutritive value of milk have given us a new tempo in this direction. As a result we find numerous schemes and programmes coming to the forefront of our National Plans in our drive for more milk product.on.

The problems facing dairy industry in our state are varied and manifold. We have to tackle them successfully and intelligibly without giving way to personal prejudices or sentimental outlook to achieve self-sufficiency in respect of milk production. If we turn back to the history of dairy industry of the world we can trace the enormous developments in milk production in the continent and elsewhere to continued selective breeding programmes and good management. It had enabled them to convert almost every cow into a milk producing factory. Hence it should be possible for us too to achieve this, by resorting to an organised programme of selective breeding and good management.

In any organised programme of selective breeding first and foremost attention must be paid in the elimination of scrub bulls and indiscriminate breeding with such bulls by cattle breeders in the state. It is a fact that the average cattle breeder in our state is more concerned in getting his cow in calf for sale, than in any concrete programme of breeding. Hence he has to be persuaded to abandon such indiscriminate breeding and educated of the advantages of an organised breeding programme. The primary requisite for such a breeding programme is the registration of all the pedigree bulls in the state and castration of all other male cattle. The paucity of breeding bulls can be overcome to a considerable extent by popularising artificial insemination. A strict enforcement of such a programme may be attempted at. The key-village scheme which has been launched in as many as 15 centres in our state is a positive step in this direction. But the number of such schemes and the cattle population affected are too small to warrant any significant result in this direction. Extension of such a programme throughout the state is a way to solve our milk problem in the long run.

The scarcity of fodder and fodder crops for our cattle is another important aspect of the problem which has to be successfully tackled. Our need falls short by one-third of the roughages and two-third of the concentrates necessary to feed our cattle. This problem can be better appreciated in the light of the fact that the improved progeny that are produced as a result of selective breeding cannot exhibit their inherent potentialities in

full, unless they are assured of a proper plane of nutrition. Nevertheless we cannot forget the fact that the land which can be cultivated for food and commercial crops is less than one acre per head in our state. Again most of the pasture lands have been brought under cultivation under the present irrigation scheme. Hence the only way that is open to us to augment our fodder resources is to adopt intensive cultivation, introducing suitable leguminous crops by rotation, mixed farming, rational utilisation of the existing grazing resources, conservation of surplus fodder resources under modern methods for use in deficit periods and efficient utilisation of available fodder resources through proper feeding programme on scientific lines. The importance of the last in our feeding programme cannot be under-estimated. Sooner we make our peasants appreciate it, earlier will we achieve the goal, better will be the health of the animals, more economic will be the milk production. In this connection it is high time we realise that supplementing alfa-alfa in cattle feeding is as important in cattle nutrition as the case of milk in human nutrition. An important advance in our programme of feeding for more milk production will be, to allot one acre per every 100 acres of land under cultivation for intensive cultivation of alfa-alfa.

Reduction of cattle population is one of the major steps that has to be taken in our programme of better feeding for more milk production. This will necessitate the elimination of useless and unproductive cattle which are assuming a serious problem in our state. Let us not indulge in creating laws introducing a ban on cow-slaughter. Such an unthoughtful act, under the existing conditions, will make their life a living death to them on one hand, will form a definite obstruction to our programme of more milk production on the other. It is a mockery to waste our sympathy on such cattle when we are not in a position to feed them. Anyway such cattle should not be allowed to feed on the little fodder and grasses available for the milch cows. The only way to tackle them if we are to balance with the ban on cow slaughter, is to reserve some forests and drive them there. Gosadhans and Gosalas are positive steps in this direction though they are serious drainage on our national economy. People should be educated in this direction and told of their fallacy in their sentimental outlook for such cattle under the existing conditions. Again persuation of our peasants to discard prejudice on religious grounds to utilise the long-standing dry cows and buffaloes for work purposes, will be a step forward in decreasing our cattle population to be fed. On the one hand it will enable the peasant to have lesser number of animals for his utility and on the other it will reduce his cost of maintaining such work animals.

Again ensuring better marketting facilities for the average milk producer in the rural areas is an important step that has to be taken for the success of our programme of more milk production. It will provide the necessary incentive to the cultivator to take up better methods of cattle husbandry. The average farmer who is a small producer of milk and calves lacks adequate means of marketting his produce profitably. This can be solved by a proper organisation of marketting on the co-operative basis.

The crux of the problem in our programme of more milk production is the yawning gulf that exists between the accumulated scientific knowledge through research works and the practical aspect concerning them. The gulf has still widened because of the illiteracy of our peasants. Unless this gap is filled, in spite of our various schemes and programmes, our goal will be as distant as an ever shifting horizon. The veterinarians, the agronomists,

the National Extension Scheme and the Block Development Officers can form a bridge to fill up this gap. For this it is essential on the part of all the people concerned in it to identify themselves with the villagers, educate them of the advantages of the various projects and schemes forged ahead of them, persuade them to take to new methods and enlist their co-operation and sympathy in executing them. This we can achieve not by carrying out them on a routine commercial basis, but by taking a lively interest in them, identifying ourselves with the various programmes connected with more milk production in the State. On the day we achieve this we can keep our banner aloft and say to the whole world,

Today our banner is unfurled;
Our Science is like a rising sun,
To shatter away the darkness in this field
And to brighten the future of this industry.

" In my opinion the regional languages are certainly important and at the same time we should not lose sight of valuable scientific material found in other languages in the rest of the world. "

Sri C. Rajagopalachariar,
Former Governor General.

Equine Strongylidosis

T Appaji Rao,
Second B.V.Sc.

THE CAUSATIVE parasites of Equine Strongylidosis are Strongyles belonging to the Genera Strongylus and Trichonema of the order Strongyloidea.

There are three important members of the Genera Strongylus and a member of Trichonema which are of common occurence in causing this condition.

Genus Strongylus : Strongylus edentatus—Morphology—This is a parasite of very common occurence in India. It inhabits the large intestines of horses especially caecum and colon. Males are 23–28 mm. long. The anterior end bears a well developed buccal capsule. Mouth opening is guarded by leaf crowns.—A row at the anterior most margin of the mouth opening and a second row at the beginning of buccal capsule. The leaf crowns are collectively called Corona Radiata which makes the parasite resemble palisades and hence are called Palisaded worms. The buccal capsule is well developed clubshaped and bears no teeth. On the dorsal aspect there is hollow thickening termed the dorsal gutter into which the duct of dorsal oesaphageal gland opens.

The male possesses two slender, equal and similar spicules, The vulvar opening is seen post equatorial.

Eggs : Egg is oval in shape, thinshelled, segmented, nontinted. Worms are ovoviviparous i.e., the larval forms are liberated from the egg outside the body of defenitive host.

Bionomics of Strongyle larvae : The first stage larva emerges out of the egg in about a day or two. It is motile and feeds on Bacteria. It moults (Ecdysis) and the second stage larva is liberated. The egg, first and second stage larvae cannot withstand even the slightest desiccation and are quite delicate. They require moisture, congenial temperature and light for proper and desired growth. Eggs submerged in water cannot grow but remain viable upto a very long period. So under suitable conditions the second stage larva gives rise to third stage larva by moulting. The third stage larva is the infective stage. This shows certain peculiar and noteworthy characters aiming at reaching its definitive host. It does not feed and has to depend on the reserve food granules stored in intestines. As the reserve food gets exhausted the larvae may die out. The larvae respond to various natural stimulii as follows :

1. *Negatively geotropic :* They crawl up the blades of grass against gravity.
2. *Positively phototropic :* The larvae crawl up the blades of grass only in mornings and evenings and if cloudy throughout the day but never in nights.
3. *Hydrotropism :* During nights they crawl down towards moisture.
4. *Thermotropism :* The larvae require warmth for survival and motility.

It may be observed that these facts are taken advantages of in undertaking prophy-

latic measures against strongylidosis.

Thus the infective larva manages to reach the definitive host and enters it by ingestion and reaches the intestines. It penetrates through the intestinal lumen and comes out into the connective tissue of peritoneum. Then it produces haemorrhagic nodules and lives inside it for about four months and moults once to give rise to fourth stage larva. This larva migrates into the mesentery between folds of peritoneum, pierces the intestinal wall — reaches the lumen and produces haemorhagic nodules again communicating with intestinal lumen. The adult worms emerge from the lumen and lay eggs in about ten months to continue the lifecycle again. Thus the larvae exhibit a short migratory phase.

S. equinus : Less common in India and more common in foreign countries. It is about 50 m.m.s. long. The anterior end possesses all structures as S. edentatus and in addition it has a large dorsal tooth at the base of buccal capsule and a pair of subventral teeth. (Lancets).

L.H. : Eggs are passed out along with the faeces. The first stage larvae are liberated in a day or two from which second stage larvae ultimately give rise to third stage larvae in 5–7 days. The infective larvae reach the host by ingestion and reaches the intestines. They then pierce the intestine and come out into serous tissue and nodules are formed in serous tissue due to constant irritation by larvae and live in nodules for about ten days. Then they moult to give rise to fourth stage larvae. These penetrate the nodules reach the liver and stay there for 1½ months. From there they come out again and reach the pancreas and stay there for about four months. Here the last moult occurs and immature worms result, which penetrate the intestinal wall and reach the lumen of caecum and colon. The eggs are laid in about six months and the lifecycle is thus continued. Thus the larvae take a short migratory phase.

S. vulgaris : It is smaller in size than the above two. It is also seen in caecum and colon of horses and red in colour. In addition to all the characters of S. equinus at the anterior region *S. vulgaris* has a pair of earshaped teeth in addition to dorsal tooth.

L.H. : Eggs are passed out along with the faeces and they become infective in about a week. Horses pick up the infection by ingestion of infective larvae. The larvae reach the intestine—pierce the wall, come out—reach the peritoneum,—enter blood circulation by piercing a blood vessel and reach the heart and lung. In the lung they pierce the capillaries and reach the alveoli—from the alveoli to trachea and cause irritation. So they are coughed up and ingested into the intestine again. Thus the larvae take a full migratory route unlike the previous two which have a short migratory route. The larvae give rise to juvenile worms in caecum and colon which develop as adults. The adult worms will lay eggs to start the lifecycle again.

Genus Trichonema. Sp. T. longibursatum : This also inhabits the large intestines of equines especially at the regions of caecum and colon. These have rectangular or cylindrical buccal capsule and a pair of leaf crowns. Dorsal gutter is small. Buccal capsule has no teeth.

The tail end bears a well developed Bursa and spicules are long, equal and similar with a barb directed posteriorly.

Life history : Same as Strongyles — No migratory phase of larvae occurs.

Pathogenesis : The disease caused by these worms is called *Strongylidosis*. Of the four worms only two possess (S. vulgaris and S. equinus) a large dorsal tooth. All the four worms are virulent bloodsuckers and

those that possess teeth cause greater damage. The infection is prevalent in young animals and less so in adult animals.

The worms attach themselves to the mucous membrane of intestines by means of their oral end and draw blood from a plug of mucous membrane in their grip. Ulcerations of mucosa occurs and the worms migrate to a fresh spot for further damage. Strongyles are capable of producing deep ulcers in virtue of the large dorsal tooth, with the exception of *S. edentatus*, but the damage caused by *T. longibursatum* is only super ficial. On account of migration of parasites from spot to spot large number of ulcerations result and inflammation of intestines is seen-Enterites.

The worms are in the habit of voraciously sucking blood and cause anaemia. It has been observed the parasites suck blood primarily for the oxygen content of it and secondarily for nourishment. The migratory passages of the larval forms through various organs (such as heart, lung, liver etc.) and their stay there causes haemorrhagic nodules which burst out resulting in internal bleeding. Toxaemia is usually caused by the death of few parasites in the bowels and it is also suspected that the secretions or excretions of the parasites may have a role in causing anaemia.

The faecal material becomes soft. The conditions of the animal become poor and emaciated. The coat is rough and the animal gets easily exhausted. Marked anaemia developes with association of oedematous swellings of dependent parts and death may result in severe cases.

The pathogenicity of *S. vulgaris* is noteworthy and interesting. It has been already mentioned that larval forms take a full migratary route along circulation and reach the seat of predilictionagain. But often the larvae escape coming out into the alveoli and reach the systemic circulation. Along with the circulating blood they reach cranial mesenteric artery and the exact mode of its reaching there is under dispute and nothing definite is known about it. One school of thought says that the infective larvae would have crept into the arterial system and might have crawled up the anterior mesenteric artery. Another school says that the larvae might have reached the anterior mesenteric artery and would have entered it by penetration of arterial wall. In any case it reaches there and causes by weakening the arterial wall. A clot is formed at that spot and the usual vessel becomes very weak at that spot and the arterial wall dilates and thus *cranial aneurysm* is caused. The clot may break and each piece (emboli) may occlude the intestinal capillaries thus interfering with blood supply. At times the nerve-plexus adjoining to the cranial mesenteric artery (Coeliac and anterior mesenteric plexus) may get affected and degenerated entailing the impairment of peristalsis resulting in intussusception, (Telescoping of one segment of intestine into another) twist and colic etc.

Sometimes emboli may block the iliac quadrification and lameness of limb might result.

Symptoms: Diarrhoea, anaemia, oedema of dependent parts. Peritonitis, colic etc.

Diagnosis: The characteristic strongyle egg may be seen in faeces. The cranial aneurysm may be felt by rectal palpation with difficulty.

Post mortem lesions: The postmortem lesions of an animal that has succumbed to strongylidosis will be as follows—Emaciated carcase, ascitis, oedema of dependent parts, and cachexia. Haemorrhagic nodules in various organs, where larval stages would have migrated as the case may be. Inflammation and ulcerations of intestines. If aneurysm had been the cause the various sequelae of it may be seen.

Treatment: Phenothiazine is the drug of choise. The urine may be tinted red in the

initial stages of administration of phenothiazine—excessive doses cause photosensitiveness and still large doses cause blindness. Oleum Terebentinae, oleum chenopodium and CCl_4 may be used.

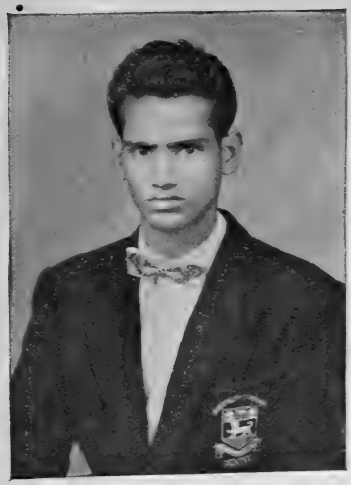
Prophylaxis: (1) Rotational grazing (2) Proper disposal of excreta (3) Avoidance of over crowding (4) Do not allow young stocks with old ones (5) Avoidance of grazing early in mornings and evenings and if cloudy day throughout the day since larvae are Hydrotropic (6) Proper hygienic maintenance of stables and feedings of animals.

A BOYHOOD friend who had become a famous doctor returned to his home town and was considerably lionized. Essentially a modest man, he attempted to stem the tide of admiration.

"I don't deserve all the credit you're giving me", he said at a banquet in his honour. "After all the patients make their own appointments, they come in by themselves, make their own diagnosis and fetch their own prescriptions."

—MRS. G. KRAUS

Boxing Personalities



Md. Ghousullah
'Our University Boxer'

Y. N. Ramasamy
'Best Boxer'

Julius Daniel
'Best looser in the inter-class tournaments'

R. Chandrasekaran
'Another Seasoned Boxer'

First batch of M.V.Sc. students with members of the staff

Hockey Team 1958—'59 Runners-up Stokes Shield

The Elephant

M. Chandrahasan,
Final B.V.Sc.

INTRODUCTION: Veterinary Surgeons in South India occasionally get the opportunity for treating elephants, since in certain States like Kerala, Assam, Madras etc., the elephants are used for various kinds of work, involving hard labour in the forest.

This essay contains some of the interesting facts relating to this animal.

Age: Elephants have an age limit of 120–140 years. They are immature upto 25–30 years. After 35 years, they are fully grown and matured. But average middle age is 70–80 years. The most easy way of obtaining an approximate idea of age is by noting the degree of turning-in of ear. In young animal the edge of the ear is straight. Afterwards edges begin to turn over.

Height: Average height of the elephant is 7 feet 10 inches. *Girth* 7 feet average. *Weight* average 5,000 lb.

• Essential points of a good elephant:—

1. Medium height, a good big barrel, skin soft and wrinkled, head massive, forehead broad, ears large, eyes bright, the trunk of good length broad at the base and blotched in front with pinkish coloured spots etc.

Feeding: The animal must have plenty of good quality food to eat. The quantity of greenfodder vary according to the dry fodder. An elephant will eat about 500 lbs. of green fodder per day. Common feeds of elephants are branches of banyan and jack-tree, bamboo-shoots, palm, paddy, straws, sugar-cane, cocoanut leaves etc. Elephant can be fed at all times except when at work. A medium sized elephant, it is estimated, should be given 15 lb. of rice, 480 lb. of green fodder, 2 ounce of salt and 1 ounce of fat every day.

If an elephant be bathed morning and evening and the water be good he will generally drink the chief portion he required. The water requirement of an elephant varies from 13–18 gallons at a time. A healthy elephant can be worked 8–10 hours per day. But in our country they are usually overworked. Sleep in the case of elephant is confined to a few hours, generally 11 p.m. to 3 a.m. but often only for a couple of hours.

Internal Organs: More or less same as in other animal except in size and weight.

Brain weighs 15–17 lb.

Heart: The elephant's heart is peculiar in that its apex presents two points instead of one. There are two anterior vena cava and one posterior vena cava. Heart rate varies from 35–40 per minute. Average weight of heart is 24 lb. The most suitable place for taking pulse is at the back and base of ear where distinctly will be seen a branch of an artery.

Lungs weigh about 40 lb.

Stomach is a simple sac 3 feet long.

Average length of intestine: 75 feet.

Liver is the largest gland, weighs about 50 lb. Gall bladder is absent.

Spleen: Average size weight 7 lb.

Pancreas is small.

Kidneys weigh about 16 lb.

Mouth is small. Prehensile organ is probosces. The upper lip is blended with the nostril to form the trunk and lower lip is small and pointed. Tongue is very small.

Trunk has got great flexibility and contractibility. Inside of the trunk is lined by m.m. A forcible blast of air blown through trunk produces the peculiar sound called trumpeting.

Reproductive Organs: The testicles are two glandular bodies suspended in the abdomen and are situated posterior to kidneys. In female, vulva is not situated near the anus but is drawn forward. Uterus, ovaries etc. are same as in other animals except in size.

Udder: Consists of 2 glands, situated at the chest region just behind the forelimbs.

Elephant's milk contains more sugar and fat.

Composition of Milk

Sp. gravity	1·038
Reaction	Neutral
Fat	3·89%
Albumin and sugar	11·82%
Ash	0·47%
Water	83·82%
Total solid	16·18%

Reproduction. Heat Symptom: After parturition the animal, in about 6 months time manifests symptoms of heat, which lasts only a few days, there being slight swelling and congestion of the vulva, which also descends to a slight degree. When the female desires attention of the male she utters certain sound. Duration of pregnancy is said to be varying between 18–22 months. It will take 18 months to give birth to a female calf and 22 months for a male calf. The calf may weigh 200 lb. at birth. Copulation time varies from 10–15 minutes.

Dose of Medicines:—Doses given to the elephant must be double those for the ox though there are many exceptions to these rules. Doses also be regulated according to age. Medicine is given in the form of balls or pills about the size of an orange. Medicine can be given with food. No medicine whether of animal, vegetable or mineral origin is known to have an emetic effect on elephant. In this the elephant resembles the horse and differs remarkably from dog and man. Average normal body temperature is 97·6°F.

Diseases of Elephants and Treatments: *Non-infectious diseases*: Almost all the infectious and non-infectious diseases met with in other animals are seen in elephants also. A peculiar disease called '*Musth*' is more often seen in male elephant than in female. It is due to congestion of temporal glands which are accessory reproductive organ situated between skin and temporal muscle. Its secretion is oily and odourless. On attaining maturity the elephants suffer from '*Musth*'. The attack lasts for few weeks or a month. The animal will show altered behaviour. It will show disobedience to man and also will show destructive tendencies.

On the first sign being evinced, the animal should be immediately removed from the vicinity of human habitation and should be tied. If possible give opium 6-8 drachm mixed in jaggery or fruit. Bromide ½–1 ounce can be given.

Wounds and abcesses are generally seen on elephant's body due to its harsh work. Ulceration of forehead, tail, ear etc., are seen commonly. This is due to excessive exposure of the animal to sunlight. Rheumatism is also described in elephants working in marshy places. Salicylate of soda mixed with jaggery is given for this condition. Bronchitis and Pneumonia are also seen. Diabetis is occasionally seen in elephants. The huge animal is not exempted from the nuisance of flies and mosquitoes. Common flies seen on elephant are Sand fly, Simulieum, Stomaxys, Tabanus etc. Ticks and Lice are also presen

on elephant.

Infectious Diseases: Some of the Trematodes like Fasciola are seen in elephant. It can be treated with Hexachlor-ethane. The dose should be given in quarter dose on 4 consecutive days either as a drench or in a ball of tamarind.

Fully grown male. 8 ounces.
Youngstock. 2-4. ounces (ICI)

Among protozoan disease Trypanasomiasis, is a common disease. This is otherwise called ' Elephant Surra'. Symptoms are pernaecious anaemia, intermittent fever, wasting, odematous swelling in dependent part, paralysis etc. Arsenic preparation are used for treatment. Antrypol is used commonly.

Dose : 1 ounce in 5 ounce of water following half of this quantity after 10 days (ICI). The common nematodes of elephant are Equinurbia sipunculiforme, Murshidea falciferoe, Bathmostomum-sangeri and Parabropema indicum are the common hook worms. Treatment for these is Phenothiazine.

Dose : 4 ounce in 4 divided doses in balls or with boiled rice. (ICI)

Elephants suffer from Foot and Mouth disease. Elephant pox in elephant is more or less similar to Small pox. Rabies is very rare in them. Symptoms are excessive twitching, convulsion, inability to swallow, paralysis and death. Tetanus is very rare. Experimentally Rinderpest can be produced in elephant. Tuberculosis in this animal has been recorded occasionally.

Conclusion: More research has to be done about the diseases of this huge animal. Large number of them are remaining in the forest without being domesticated. If they are cared and managed properly a good amount of work can be obtained from them.

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" Countries in the world today should try to understand each other, for, only through understanding can we hope to live in peace with each other. I pay my tributes to India's contributions to the cause of peace in the world. "

Dr. E. J. Long,
Group Leader, T.C.M.

AHIMSA OR HIMSA

S. RAMACHANDRAN,
Final Year, B.V.Sc.

Oh, ye credulous men,
Have you thought of our welfare
When you passed the legislation,
To free us from a deadly nightmare?

Ye uncouth men,
Ahimsa in words, not in thy action;
To free us from being slain,
Ahimsa in thy conception!

Ye shameless men,
Ahimsa in talk, not in thy approach;
To tie us off-feed in thy pen,
Thy penalty for our helpless encroach!

Ye cruel men.
Ahimsa in pen, not in thy hearts;
To discover feed thou drive us out,
With tucked up belly, parched out throats,
As walking skeletons to roam about,
Thy reward after our useful life!

Ye wretched men,
Ahimsa in script, not in thy deeds;
In practice, thou beat us out,
To see us around thy fields,
In search of feed roaming about,
With starvation as our bitter breath.

Ye bogus men,
Through dark and thirsty years,
We have drunken but muddy waters;
Bitter was the fodder we took,
To convert into heavenly milk;
Ah! tumbling stones pave our path!

Ye stubborn men,
Ousted from human hearts,
With callous men round about
And hunger in our entrails,
Alas! we know not the act of committing
Merciful self-extinction.

—AN AGED COW

The Livestock Farm at Chettinad under the Second Five Year Plan

V. Visvanathan,
Final year B.V.Sc.

THE CHETTINAD Livestock Farm has been started under the auspices of the Second Five Year Plan in Ramanathapuram District of this State. This district is generally considered to be poor in cattle wealth. The type of cattle found in this district in general is only non-descript. There is neither any recognised breeder as such nor is there any recognised breed of cattle to any remarkable extent. The Government have therefore rightly felt the need for starting a livestock farm in this district. Though priliminary work such as selection of the site and taking over the same was started at the close of the year 1956-57, the actual work began only from 4-6-1957.

The farm is situated at about nine miles from Karaikudi on the Karaikudi-Trichy Trunk road. The site is commonly known as the abandoned aerodrome area. A total of about 1,769 acres has since been taken over and further work of alienation of lands at the disposal of the Government and acquisition of private lands in order to eliminate pockets are now in progress. Ultimately the area of this farm will become a little less then 2,000 acres. The farm lies within the limits of the revenue villages of Pallathur, Kothadi Kanadukathan and Kothamangalam. It is served by the Chettinad Railway Station in the Southern Railway and by the Chettinad Post and Telegraph Office.

The objects of this farm are mainly these (1) To serve as demonstration and training centre to the public on Scientific feeding, breeding, housing and management of cattle including pasture management, fodder production and conservation of fodder as silage and hay, arbori-culture etc., alsc demonstrating the cattle, production of hygiene milk and handling of milk and milk products. (2) To maintain approved breed of cattle like Kangayam and Tharparkar varieties with particular content to assess their adaptability to the climatic and geological conditions of the area and to make available stud bulls of acclamatised strains of these breeds for the improvement of the local type of cattle. (3) To undertake research on breeding and other problems connected with Animal Husbandry. (4) To produce fodder and manage pasture to meet promptly the requirements of farm stock and incidentally to study the local varieties of grasses and to explore the possibilities of improving their yield qualitatively and quantitatively and also to study the adaptability of different forage crops to the climatic and geological conditions of the area, and to make available to the public the seed materials of proven strains of forage crops and grasses and (5) lastly to contribute to the public health of the area by supply of whole-some milk and milk products though to a limited extent and also to provide employment oppurtunities to the un-employed public.

So far an area of 1,000 acres of jungle land has been cleared of all the forest growth and rendered fit for cultivation. The farm has

been fenced all round with live fencing materials. A big well 30 feet in diameter and 40 feet in depth has been sunk and another well work is in progress. An area of 250 acres has been contour bounded as a measure of soil conservation, and the bunds stabilised by Vegetative processes. Intensive development of 100 acres of pastures has been taken up. The farm has now got five semi permanent cattle sheds and two calf sheds. A pucka building has been constructed for the office of the Dairy Manager. The total strength of the livestock at present is 295 of which 248 are Kangayam ·39 are Tharparkar and eight are Sindhis. The farm at present is able to sell 400 lb. of milk daily. It is hoped that the farm will become full fledged as a result of the contemplated research on grading up schemes with Tharparkars.

ACKNOWLEDGMENT:

I thank Dr. K. S. Shanmugasundaram, Superintendent, Ramanathapuram District Livestock Farm for having kindly furnished me with the required particulars about the farm.

"Indian students are in large number in America and in the same manner Americans should come to India to learn many things regarding religion, philosophy and some aspects of science."

Dr. I. D. Wilson

Traumatic Pericarditis in Cattle

Shaari Bin Ishak,

3rd Year, B.V.Sc.

OCCURANCE: Traumatic pericarditis of cattle is of such common occurance that it is necessary to give special attention to it. This most frequent heart affection among cattle is, however, rare in other domestic animals *viz.* horse or dog. Is there any non-traumatic pericarditis among cattle? We may answer 'yes' to this question for the pericardium of an ox may suffer inflammation in the course of acute muscular rheumatism, and certain infectious diseases. But it has been found that in most cases where the animal is suffering from simple digestive disturbance, the real cause is traumatic reticulitis and (or) pericarditis.

There are several reasons why foreign bodies are found more frequently in the stomach of ruminants and especially in those of cattle, than in other domestic animals. Cattle have a notoriously erratic appetite which is characterised by their habits of licking objects within reach and swallowing them if possible. Among the objects that are being swallowed are very often metallic in nature. The shape of these foreign bodies causing traumatic pericarditis is very often that of pointed objects about three inches long and not thicker than a lead pencil. Example of such objects are nail, piece of wire, hair pin, needle, piece of broom stick, etc. Cattle consumes food very rapidly and chews it imperfectly in the first instance leaving it later to be completed during rumination. Traumatic pericarditis is met with more rarely in large farms than in small herd where they have the tendency to feed on kitchen refuse. Pericarditis can be caused by wound inflicted through the ribs e.g. fracture ribs, but this type is extremely rare.

Pathogenesis: Having swallowed such a pointed object that has been mentioned above, along with its food, the next thing that takes place is that the object ultimately finds its way into the reticulum, the object becomes fixed in the reticular mucosa. If the object is pointed sooner or later it is forced through the reticular wall and penetrate the diaphragm. It is supposed that the beating of the heart exerts a certain amount of suction force which attracts the foreign object to the wall of the heart and eventually causes it to pierce through the pericardium and enter the cardiac musculature. Actually, however, the movement is due to the physiological process of digestion and respiration, during which the reticulum and the diaphragm are constantly changing their position. The reticulum is only at a short distance about two inches, and seperated from it only by the diaphragm. So, once the point of the object has penetrated the reticular wall, it is not long until it meets the cardiac wall. This fact explains the frequent injury of the heart and its enclosing membrane—the pericardium—by the sharp foreign body. To reach the cardiac wall, the object has to pass through the pericardium, and this is the sac therefore usually first affected. When the inflammatory condition

attacks the pericardium death usually follows in a short time.

Symptoms: In general, we can say that the symptoms in the early stages are unnoticed or so slight as to be disregarded. Only in fairly advanced stage of the disease the symptoms are manifested. There are instances when an affected animal with a traumatic pericarditis drops dead in its stall without any symptoms being noticed. The obvious symptom is usually preceded by prolonged digestive disturbances which last from 1–6 weeks ultimately becoming severe. When the foreign body has pierced the pericardium, the symptoms characteristics of pericarditis will follow. The animal shows severe pain, avoid all motion, stand with head stretched forward, the elbow spread out, the hind limbs drawn beneath the belly and the back arched with frequently looking back towards the abdomen. The presence of fluid exudate in the pericardium causes splashing, gurgling sounds and sound of falling drops of liquid. Friction sounds in the heart region afford the most valuable symptoms. Percussion may reveal dullness. There is also an intense filling of the jugular vein causing it to dilate like thick cord and to stand out strongly.

Post Mortem Lesions: The penetration of the pericardium by the foreign body sets up pericarditis, but the variety of inflammation which results, depends on the nature of organisms which accompany the foreign body. In a majority of cases, the organisms belong particularly to the class pyogenic organisms such as Streptococci, Staphylococci or C. pyogenes. It is generally found that there is an exudation of purulent, sero-purulent or sero-fibrinous nature in the pericardial sac. Adhesions of the heart to the pericardium and reticulum to the diaphragm are found. There are thickening and organisation of exudate on the surface of pericardium. Also abscess in the cardiac musculature, abscess in the lung and spleen, occasionally liver abscess and even metastatic abscess of brain have been noticed.

The pericardial exudation is very varied in its composition. Its colour may be pale, clear or milky and sometimes greyish yellow, reddish brown or dirty red. A smear of the exudate reveals erythrocytes, leucocytes, drops of fat and the concerned bacteria. The fluid is often mixed with putrid gases. The quantity of this exudate may be up to 2-3 gallons. Great pressure is thereby exerted upon both the heart and its adjacent organ, the lung. The great veins are compressed. If the foreign body has pierced the cardiac wall even blood may be found in the pericardial sac.

The solid exudate consists of fibrinous, gelatinous, coagulated lymph which become organised later into connective tissue. They occur in the form of deposits of filamentous, string-like proliferation between the heart and the pericardium. The presence of thick deposits of yellowish fibrines in the pericardium makes the heart exceedingly large and its surface assume a shaggy or so called 'bread and butter' appearance. The coagulated lymph lying on the heart sometimes becomes slimy and undergo fatty degeneration. The heart itself shows serous infiltration with circumscribed fatty degeneration and softening of its muscular fibres. Abscess will be formed at the space where the foreign body is embeded in the heart. The object may pierce the ventricle or lie in the pericardium. In prolonged cases, the heart becomes hypertrophied or as a result of pressure by the pericardial exudation, it is atrophied and becomes very small. The pericardium in course of time becomes very thick about one inch. There is also an adhesion between the pericardium and the diaphragm along with other severe local anatomical changes.

There are cases in which the heart is not involved at all. The foreign body, after travelling through the lower part of the lungs,

reaches the chest wall, usually in the region of the dewlap. It forms an abscess there and when the pus bursts through the skin the object is allowed to escape or be removed. These cases are however, not at all common.

Diagnosis : The most diagnostic signs are modified heart sound, acceleration of pulse, pain and an increased area of dullness on percussion. The affection can be recognised only by a highly trained clinician. A mine-detector and X-Ray will confirm the diagnosis.

Prognosis : The course of the disease varies in several cases usually extending over weeks and months and even longer. But in majority it is often grave.

Treatment : If the prognosis is favourable administration of small doses of laxative will relieve any disturbance in defaecation. Diet must be regulated appropriately. Cold compress can be applied to the region of the heart to alleviate the inflammatory condition. Cardiac stimulants are indicated for weakness of the heart. Diuretics can be tried to facilitate absorption. Tapping the exudate in the intra-costal space may provide drainage but this may lead to other complications. Removal of the foreign body can be performed by a rumenotomy but this leads to such seriousness that is justified only in animal of considerable value. In most severe cases treatment is not usually advisable.

Acknowledgment : My thanks are due to Dr. R. Krishnan, Assistant Lecturer in Pathology for his detail explanation on this subject during a post-mortem examination on a case of traumatic pericarditis of a cattle.

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4. Post Mortem record.

Answers for SURGICAL QUIZ

1. Radial Paralysis in dog
2. Congenital contraction of the flexors of the knee
3. Ventral Hernia in fowl
4. Exophthalmia
5. Hare-lip in calf

From the errors of others, a wise man corrects his own.

You build a bird-house, it may last 5 years,

You build an automobile, it may last 20 years,

You build a house, it may last 200 years,

You build a Cathedral, it may last 2,000 years,

You build a Godly character, it will last for Eternity !

The Mail

DO YOU KNOW MY MOTHER?

V. NAGARAJAN,
3rd Year B.V.Sc.

❀

May thee know my mother
An unsurpassed P. G. Centre;
Doors opened wide hither
Ready to repair us higher
A boon thus it is for us
Serving the dear Motherland ours.

Vanishes even the land unbound,
Eye twinkling, a time found wore
The hydrogen-bomb is to sound.
Eh! Let any disharmony roar
Remains our dear Mother's glory
In the annals of the history.
Not 'He' or 'She' the difference we not
All alike study here;
Reared and bred we quote
"Yeh! a nice Mother I swear"!

Contented are we to the maximum,
Our emoluments though be minimum.
Loftiest and better are our roles
Leaders sure we know to console.
Ever remember the horse, cattle, dog
Goat and sheep our dumb, the poor
Every minute expect thee a curer.

Population Growth and its Effects on Indian Economy

M. Mahadevan Pillai,

Final Year B.V.Sc.

POPULATION is a great national problem to be solved. Today population of India is growing in a high speed, the speed being 5 millions per year. The birth rate is higher than death rate. That does not mean that death rate is less in India. When compared to other industrialised and improved countries the death rate in India is in its highest peak.

Even, when the population is in a standard level, there are so many problems to be solved. But when the population is increasing in such a way, problems may stand still without being solved. Whatever five year plans be launched they may meet the same end i.e. failure. Because, as production of food products is increased there is a simultaneous, rather marked, increase in production of children.

So to avoid such pitiable circumstances our Government as well as different hospitals have tried to initiate new scheme known as 'Family Planning' and vast propaganda is being done in these days. But there are several objections to that scheme in villages. There are certain sentimental objection to that. So facilities must be given to provide sufficient knowledge about family planning and people must have a crystal clear knowledge. Their false ideas must be called out.

Recently the Madras Government launched a scheme. They wanted to try family planning in the case of non-gazetted officers of Madras city. Rupees fifteen would be given to each N.G.O. who had undergone vasectomy as an allowance for his expenses. But it was not fruitful.

There are different methods which may be adopted for family planning. The age of marriage is to be considered. The bride-groom must be above 25 years and the bride must be above 20. The husband and wife must have a thorough knowledge about family planning. They must be fully aware of the economic condition of their family whether their income will be able to support their living. There are various methods. Out of them I will mention about one.

Vasectomy: Vasectomy is cutting and ligaturing the vas deferens. By conducting this operation, which is simple, the man cannot inseminate but he will be having his masculine vigour more than a normal man. Operation is very simple and soon after operation the person can walk. The husband after producing 2 or 3 children can undergo this operation and his life will be very pleasant and he sets up an ideal family which is helpful to National Economy. He and his wife will be keeping good health and can do manual help to the nation. There are other methods also but only Vasectomy is found to be efficient and safer. But it is better to undergo this operation only after getting 2 or 3 children so that if even one should die it may not affect much.

These schemes though they look good and useful, will give expected results only when

employed vastly. Every Indian must know he is an important corner stone in building up a magnificent India which will be certainly beneficial though not for him for his children. Every Indian must learn how to write and read, at least his own language, so that he may know about various schemes including family planning launched by our Government for upgrading our living standard.

Other methods of bringing down the evil effects of population growth, on the Indian economy is building up of various factories, dams, workshops, etc., so that un-employment problem may get solved at least to certain extent. Food production must be increased to a great extent by adopting new techniques, modern fertilizers, modern instruments etc. The farmers and villagers must and should be fully aware of the improvements and importance and significance of five-year plans. They must utilise the advice and help rendered by T.C.M. experts. The far advanced countries like United States of America, Soviet Union etc. are helping us in various ways by sending experts to India, giving economic aid etc. Every person of India must know about it and he must also aid Indian Economy and thereby Indian Nation by adopting family planning and bringing down the birth rate. Then only India can achieve its goal in the comparatively near future.

Antibiotics

A. P. Thirumalaiswamy,
3rd Year B.V.Sc.

EVEN THOUGH the production of antibiotic substances by micro-organisms has been known for 50 years or more, a greatly increased interest in antibiotics is taken by the people only after the recent discovery of the unique chemotherapeutic properties of Penicillin. Though antibiotics are now-a-days extensively used in veterinary practice and though many of us already know a good deal about their uses it is the author's wish that a collection of information from published works and its presentation in the present form in the College Annual will be of some use to his fellow students.

We should know, first of all, what is "*symbiosis*" and what is "*antibiosis*" how the term "*antibiotics*" is applied; from where it is derived; what is the "*pioneer group*" of clinically effective antibiotics"; and what are the actions and general uses of antibiotics and their significances?

If different species of bacteria grow well together and the presence of one organism is favouring the growth of another it is known as *symbiosis*, eg. the enhanced growth of Haemophilus influenzae in the presence of Staphylococci. But if one species reveals antagonistic action to another, it is known as *antibiosis*. This antagonism is mainly due to the chemical products elaborated by the antagonistic organisms and it is because of these, the term "antibiotic" is applied to the chemical product produced by the antogonistic organisms. These chemical substances of low toxicity to the animal body are successfully used for therapeutic purposes in bacterial and other infections, since these substances have been found to control the development of certain micro-organisms in the blood or tissues, either directly or indirectly.

Knowledge already available suggests that an antibiotic is a substance produced by micro-organisms, which inhibit the growth of (or even destroys) other micro-organisms. Various antibiotic substances derived from plants, fungi and saprophytic bacteria are potent bactericidal or bacteriostatic agents.

For many decades the microbiologists have been interested in the soil bacteria, fungi and moulds. They studied the role of niter-bacteria in the fixation of atmospheric nitrogen by legumes and the part played by the micro-organisms in the sewage disposal. From such studies they came to a conclusion that the myriads of microscopic scavengers were in competition with each other.

In 1877, in his study of Anthrax bacilli, Pasteur took an interest on non-pathogenic organisms and finally he came to a conclusion that Anthrax bacillus is a contaminant because it cannot survive in ordinary soils. In 1885, in Germany the enzyme "*pyocyanase*" was studied extensively in relation to its effects on Pseudomonas aeruginosa (Bacillus pyocyaneus). It was regarded that the enzyme pyocyanase was the active principle, lipoid in nature and was lytic to many other bacteria. In 1939 Dubos extracted "*tyrothrycin*" from

the soil bacterium, Bacillus brevis, and he showed that it destroyed certain Gram-positive pathogenic organisms in cultures. He standardised his preparations by protecting mice against a standard peritoneal injection of pneumococci. It is a polypeptide and acts both in vivo and in vitro and its toxicity to animals is relatively low.

Thus soil is an excellant culture medium for micro-organisms which are usually present in large numbers. It is true that soil organisms have received most attention, particularly bacteria and actinomycetes. The production of antibiotics is much more common among soil inhabiting fungi than among fungi parasitising the areal parts of higher plants. So the capacity to produce antibiotics is more frequent among and characteristic of the micro-organisms of the soil association.

There are some degree of antogonisms between the soil micro-organisms. They are (1) Reduction in virulence of soil-borne plant-pathogenic fungi by saprophytic antogonists. (2) Soil sickness and the effect of partial sterilization of soil. (3) Biologically induced toxicity. One of the above mechanisms responsible for biological antogonisms in soil is the production of antibiotics by certain micro-organisms.

In 1945 Waksman has cited some points on the limitations in the significance of antibiotics in soil processes. They are :—(*a*) The fact that an organism produces an antibiotic in an artificial culture bears no evidence that it is capable of doing so in soil. (*b*) Many known antibiotics are extremely unstable and could not be expected to remain unchanged in soil for sufficiently long to have any effect. (*c*) There is no evidence that the production of antibiotics affects the survival of organisms producing them.

There are mainly two types of bacteria which produce antibiotics. One is aerobic spore formers and another pseudomonas fluorescens group. Aerobic spore formers produce bacillin, aerosporin, gramicidin, subtilin etc., which are of great importance. Pseudomonas produce hemipyocyanine, pyocyanine and pyocyanase all of which may have some significance. The antibiotics produced by actinomycetes include such substances as streptomycin, streptothricin, actinomycin, chloromycetin, litomicidin, lavendulin etc. The antibiotics produced by fungi are potentially important. Since speciation is more definite in fungi the antibiotics produced by fungi have been more accurately characterised, chemically and biologically, than those produced by bacteria and actinomycetes. Organisms producing penicillin, patulin, gliotoxin, viridin, citrinin are common in soil. With the exception of penicillin and viridin all are relatively stable. In certain special conditions even these two also would be relatively stable. Of course, the fungi are not generally distributed in the soil but they are found in forest litter and the upper layers of the forest soil.

So far I have been dealing with the production of antibiotics and the micro-organisms concerned thereto. Now I will go on to the important antibiotics drugs The 'pioneer group of clinically effective drugs' in this category are :

1. Penicillin, 2. Streptomycin, 3. Aureomycin, 4. Chloramphenicol (Chloromycetin) and 5. Terramycin etc.

In addition, to the above several others having restricted applications in veterinary practice are also available as by-products or derivatives. Tyrothricin, Streptothericin, Neomycin, Subtilin, Polymixine group, bacitracin, tomatin etc. etc., are among them. Of the important antibiotics specified above Penicillin is the one most commonly employed and so I venture to furnish below the informations I have collected on it.

Penicillin : Is derived from the mould,

Penicillium notatum found in sandwiches. It is Thom, in 1932, who identified Penicillium notatum and Fleming named the broth filtrate, which contained the inhibiting factor, *Penicillin.* It is a compound of a group of closely related complex organic acids. These acids possess similar but not identical antibacterial properties. Penicillin is prepared in crystalline form. The antibiotics are generally unstable and some are autocatalytics. So they are kept in ampules and preserved under refregeration. Penicillin is available in different forms and they have been designated F, G, X and K or I, II, III, and IV respectively. Thus penicillin G is the benzyl ester, X—parahydroxy benzyl, K—the normal heptyl and Dehydropenicillin, F—the normal amyl. They are available as crystalline sodium or calcium salts of the respective acids. The effects of penicillin in vivo and in vitro have shown that it is selectively effective against certain organisms and equally selectively ineffective against certain others. It is particularly effective against Gram positive bacteria.

Preparations of Penicillin : (*a*) *Sodium and Potassium salts of penicillin :* Have similar characteristics but calcium penicillin is less hygroscopic than sodium penicillin.

(b) Penicillin in oil and wax : This is a sterile suspension of calcium penicillin in a mixture of seasame oil in which white wax is dispersed.

(*c*) *Penicillin ointment :*

(*d*) *Penicillin tablets :* Sodium or calcium salts of penicillin buffered with calcium carbonate, anhydrous sodium citrate or aluminium hydroxide.

(*e*) *Crystalline Procaine Penicillin :* A compound of procaine and penicillin.

Action : In therapeutic concentration and in pure form it is not toxic. The main action is bacteriostatic only and under some circumstances bacteriocidal. It is considered that its main action is not to stop the growth of the organisms but to prevent their multiplication by some action which interferes with cell division, probably by competing with bacteria for food and enzymes.

Absorption and Excretion : It is destroyed by acid media. Therefore it is effective parentarally than orally. It is equally distributed throughout the tissues of the body and is rapidly absorbed after intramuscular injection and rapidly excreted through the kidney (20% through glomeruli and 80% through tubules).

Therapeutics : Since penicillin is extensively used in most of the bacterial infections observed in veterinary practice, the following table given by Merk, will give an idea for penicillin use in veterinary medicine.

It is used as the best therapeutic agent for the treatment of :

(*a*) All the staphylococcous infections with or without bacteramia :

Carbuncles—soft tissue abscess.

Pneumonic empyaema.

Wound and burns infections.

(*b*) All clostridial infections : Such as Gas Gangrene, Malignant oedema etc.

(*c*) All anaerobic Streptococci infections.

(*d*) All Pneumococci infections of meninges, pleura and lungs.

(*e*) All cases of Anthrax—Swine erysipelas.

(*f*) Pyelonephritis (Corynebacterium renale)

It is very effective in the treatment of Streptococcal mastitis (Streptococcus agalactiae) but not useful in Staphylococcal mastitis. In conjunction with serum, it is effective in treating Leptospirosis. In addition to the above uses it is also found effective in surgical and opthalmic practices. It is also used in the isolation of Haemophilus influenzae in sputum etc., by permitting the growth of Influenza bacillus and inhibiting that of various Gram

positive cocci.

Penicillin differs from sulphonamides in two important respects :

(*a*) The presence of pus or blood does not neutralize the action of penicillin whereas these materials affect the action of sulphonamide.

(*b*) The maintenance of blood concentration (despite earlier impressions that antibiotics acted like sulphonamide in this respect) is not nearly so important. The reason is that the sulphonamide on bacterial metabolism is readily, reversible, whereas exposure to antibiotics (eg. penicillin) frequently leaves the bacteria with a hangover which persists even after the removal of the antibiotics. In short, sulphonamides are primarily bacteriostatic whereas antibiotics are bacteriostatic in low concentration and bactericidal in high concentration. Mice infected with Streptococci can be cured with one injection of penicillin but not with sulphonamide. Sulphonamides, however, excel the antibiotics in their ability to penetatre the cavities such as the joints, pleura, subarachnoid space etc. And also the symptoms of toxicity of antibiotics are mild and less frequent than sulphonamide.

Penicillin is effective against Gram positive aerobic and anaerobic organisms and against the Tryponema pallidum and related pathogens, but in contrast to Streptomycin, is ineffective against tubercle bacilli and such Gram-negative organisms as the colon bacillus. Streptomycin is effective against the latter organisms as well as certain Gram-positive pathogens. But unlike, penicillin it is only weakly effective against Tryponema, against anaerobic and against most cocci. There are many penicillin resistant organisms such as Brucella melitensis. Haemophilus influenzae, Escherichia coli, Mycobacterium tuberculosis Proteus vulgaris, Pseudomonas aeruginosa, Salmonella paratyphi etc. However, the discovery of penicillin and its remarkable results in a number of infections have stimulated workers to search for newer antibiotics which would be effective against penicillin resistant organisms and today, as you all know, we have a large number of antibiotics for the control of infections of different types as the outcome of sustained work in this field. We are indeed blessed today because we have among antibiotics many remedies effective in a variety of infections to which our patients succumbed hitherto.

ACKNOWLEDGMENT :

I wish to express my sincere thanks to our Professor of Pharmacology Dr. Velayudhan Nair, G. K. for his suggestions in the preparation of this paper.

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" Preservation of wild life should not progress to such an extent as to interfere with the peaceful life of human beings. There is no point in feeding animals which have become useless to human beings. "

M. V. Krishnappa, Union Deputy Minister for Food and Agriculture

Canine Eczema

K. Venkataraman, B.V.Sc.

DEFINITION: Among the skin diseases of dogs eczema is a commonly occurring condition. It is exceedingly difficult to give a clear definition for eczema. As it resembles the inflammatory processes of other organs such as the intestines, liver or kidney it may be defined as the catarrh of the skin.

Etiology: This condition may arise either from external or internal causes or both. External causes may be (i) dirt accumulating on the skin (ii) frequently bathing the dog with soft soap (iii) accumulated secretions and discharges (iv) continued application of irritant medicaments and (v) ecto-parasites such as bees, lice, fleas, ticks, mites and fungus.

Internal factors may consist of (i) autointoxication particularly following chronic constipation (ii) catarrh of mucous membrane of the gastro-intestinal canal due to helminth parasites such as tape worms (iii) feeding with unbalanced food lacking in minerals and vitamins (iv) hormonal imbalance for eg., insufficient or excess secretion of the gonad or thyroid (v) kidney diseases of a chronic nature (vi) allergy, (vii) rarely some of the chronic diseases such as T. B. and Anaemia and (viii) probably hereditary factors in certain breeds.

Stages in the development of lesions: The various stages noticed in the development of eczema are :—

1. *The erythematous stage*: There is diffuse reddening of the skin due to hyperaemia and there is exudation.

2. *The papular stage*: Red nodules are seen. They contain small cellular infiltration and serous exudate. Such a condition is described as "Nodulous" "Pimply" or "Heat" eruptions.

3. *The vesicular stage*: Is characterised by the formation of vesicles.

4. *Pustular stage*: Follows vesicular stage. The pustules are more opaque and purulent. More extensive area is involved when it bursts after a time. It is called "Eczema Impetiginosum" which corresponds to "Pustulousrash" and "Scurfy Eczema".

5. *Moist stage*: May be seen when the vesicles open. There is exudation of lymph on the red surface.

6. *Scaly stage*: Seen when the exudation dries up and forms scales covering the skin.

Symptoms: Symptoms are characterised by skin lesions and for purposes of description they may be divided into Acute and Chronic.

Acute: The usual symptoms in the acute condition consist of red colouration of certain parts of the skin as shoulder, hip, back or face which are usually thickened and these surfaces are either smooth or pustular. There is severe irritation and consequently the animal violently scratches and the condition is thus aggravated when the condition may be described as "Acute Erysipelatous Eczema". Such of those types that show hypersecretion may be described as "Eczema acutum pemphigoides". Various interme-

diary types are also noticed and some of them are :—

(i) Macular acute eczema—characterised by superficial spots of varying size.

(ii) Papular acute eczema—a condition in which small reddish papules of various sizes are seen either dispersed or in crowded foci.

(iii) Vesicular acute eczema—characterised by formation of vesicles that may develop from either macular or papular eczema.

The acute types may also be divided into (i) Moist eczema or eczema medidans where there is excessive exudation of serum and (ii) Dry eczema or eczema acutum crustosum in which the scanty exudation has dried up to form crusts.

Chronic form : The course of chronic forms is more prolonged and the skin is brownish red in colour and thick with coarse and rough surface covered by scales. The hair coat is very thin and loses condition gradually.

Some of the observations made, suggestive of the causes are given below. If the eczematous patches slowly develop at the base of the tail and then extend upto the back it may be due to lesions in the urinary tract. Eczematous patches around the tail, the anus, vagina between the hind limbs and on the scrotum may be attributed to hormonal imbalance. A special type of eczema is commonly seen in hunting and other sporting dogs in the interdigital space (eczema intertrigo) which is caused by mechanical and traumatic irritation.

Differential diagnosis : 1. First of all ectoparasites should be eliminated both by naked eye and microscopical examination of the skin scrapings.

2. Toxaemia due to intestinal stasis. The colour and consistency of the faeces preferably after an enemata provide valuable evidence in this regard.

3. Teaniasis—Macroscopic examination for the presence of mature segments of tape worms or microscopically for the presence of ova of tapeworms.

4. Chronic kidney diseases : Uriniferous type can be diagnosed by the detection of the smell of urine on the skin and also through examination of urine for albumin, sediments, casts and the like, and by estimation of blood urea which will be found usually high.

5. Hormonal imbalance : In thyroid defeciency there may be alopacia and the animal may be obase. Eczema following disturbances of the internal secretions of the gonads is likely to respond well to substitution therapy.

6. Allergy—A carefully drawn out history may throw some light in eliminating this condition.

7. Eliciting information as to the type and nature of feed given will give a clue to diagnosis in cases of deficiencies.

Treatment : Treatment depends on the cause. The author had the opportunity to observe and follow the line of treatment adopted in the following three cases in the college hospital.

1. An Alsatian dog (DW. IP. 5244) was brought to the ward with acute moist eczematous patches in the interdigital space extending to the coronet above in the right hind. Microscopical examinations of scrapings and faeces revealed nothing of importance. So antiseptic foot bath with I in 1000 of potassium permanganate solution was given for a week. After the foot bath the foot was dressed with dry dressing powder and bandaged. A course of injection of Aricyl subcutaneously 1 c.c. daily for a week brought about complete cure and the patient was discharged after 10 days.

2. A black non-descript dog (DW. IP. 5195) 3½ years old was brought to the ward with chronic eczematous patches extending from the base of the tail to well above the back. Microscopical examination of skin scrapings and biochemical examination of

urine revealed nothing of importance. Faecal samples on microscopical examination showed ova of Ancylostome species. The dog was put on a course of calcium gluconas 10%—10 c.c. I/V. Internally the following was prescribed and repeated.

R/

Syr. calcii hypophosphatis	– mx
Syr. ferri iodidi	– mv
Sharkliver oil emulsion	– I oz

Mft haust.

Locally the skin patches were dressed every day with a powder consisting of the following :

Calamina preparata	
Acidi boraci	
Zinc oxide	aa 1 oz
Amylum	4 oz

After the above line of treatment extending over two weeks the skin condition improved considerably. Before the dog was discharged cured it was treated for ancylostomiasis.

3. The above line of treatment was followed in another case (DW. IP. 5307) which was showing acute erythematous patches on the skin all over the body. Microscopical examination of skin scrapings and faeces revealed nothing of importance. Biochemical analysis of urine showed no abnormality. The lesions dried up, the coat became glossy at the end of the course of the treatment. It was discharged cured.

Conclusion : In conclusion the author wishes to point out how important it is to protect the skin of the animal from ectoparasites and dirt and other foreign particles. This required regular brushing and deticking daily. Bathing once in 15 days with some non-irritant soap and thoroughly washing the soap lather is a good practice in our country to keep the dog healthy.

My thanks are due to Dr. M. S. Ganapathy, Professor of Medicine, for his encouragement and suggestions in preparing this article.

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ACTIVE

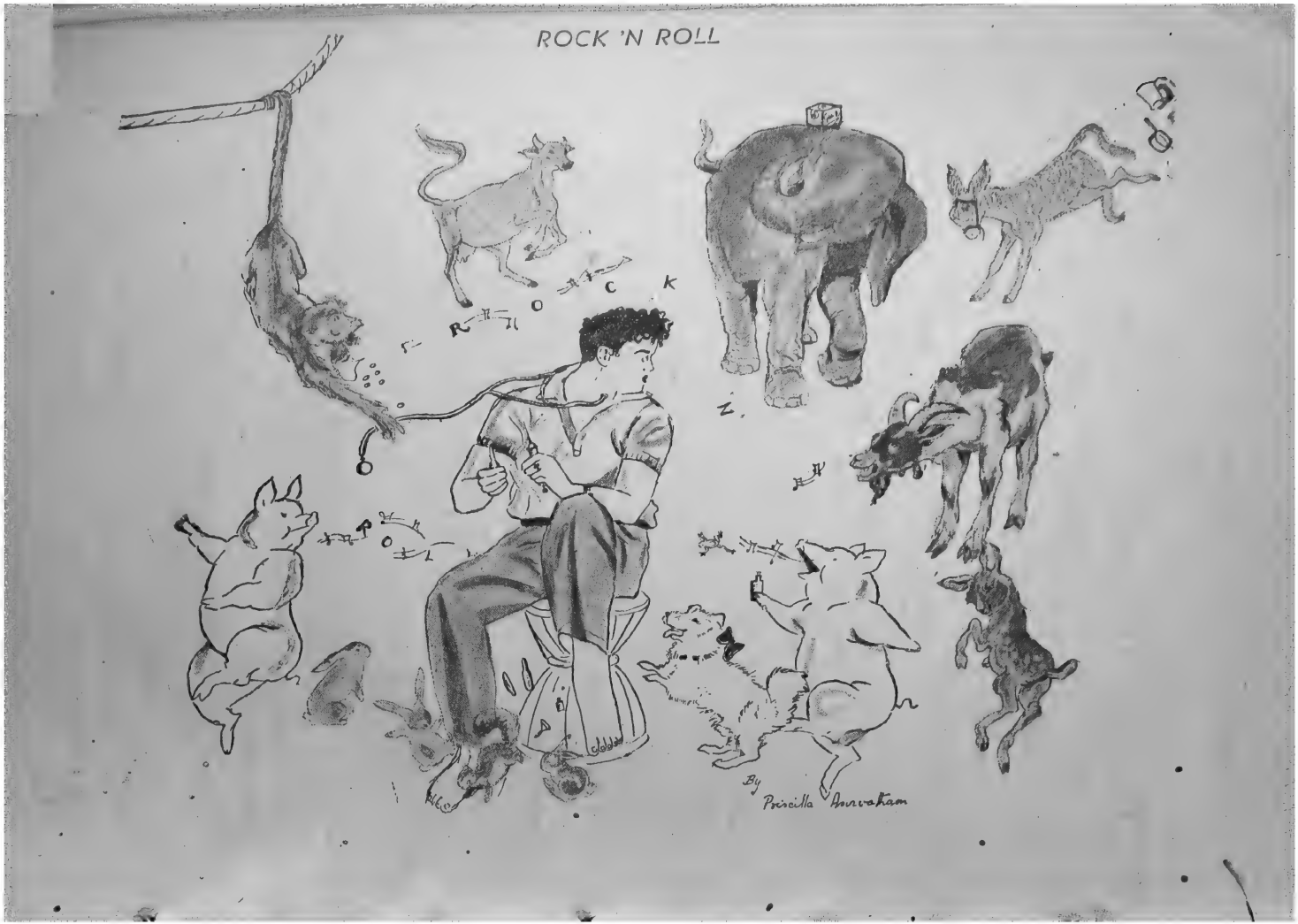
A Negro gentleman had been a preacher for some little time.

Some one said . "Uncle Amos, how many members have you got in your church ?"

And he replied : "I got sixteen."

"Are they all active ?"

And the old preacher answered : "yes, eight of them fur me and eight of them agin me."


ROCK 'N ROLL
R O C K
By Priscilla Asirvatham

The Madras Veterinary College Association

ANNUAL REPORT 1958-59

V. Visvanathan,
Student Chairman

OFFICE BEARERS

President :
Dr. Bertie A. D'Souza, G.M.V.C., B.V.SC.
Dr. I. D. Mantramurti, G.M.V.C., B.V.SC.

Vice-President :
Dr. K. P. Chandrasekaran Nair, G M.V.C., B.V.SC.

Student Chairman :
Sri V. Visvanathan

Secretary :
Sri J. Antony Doss

Asst. Secretary :
Sri T. R. Loganathan

Treasurer :
Sri C. M. Narasimhalu Naidu

Editor :
Sri D. Balraj

Sub-Editor :
Sri A. Solaimalai

CLASS REPRESENTATIVES

I year : Sri P. Subramanyam and
„ Mahindar Singh
II year : „ S. N. Govindarajulu and
„ V. N. Appaji Rao
III year : „ V. Katha Perumal and
„ M. Chandrasekaran
IV year : „ K. Srinivasulu Reddy and
„ S. C. Parthasarathy

LADY REPRESENTATIVE

Miss. Priscilla Asirvatham

ADVISERS

1. Sri M. Anantharaman, M.A., M.Sc., P.Z.S.
2. Dr. D. Mariappa, G.M.V.C.
3. Dr. C. R. Velayudhan Nayar, G.M.V.C.

IT IS indeed a great pleasure to present the 23rd Annual Report of the Madras Veterinary College Association. I am really proud to mention in this report that this academic year 1958–59 has been the most eventful and busiest so far as the Association activities are concerned. We the office bearers of the 23rd Sessions of the Madras Veterinary College Association took over the charge from the outgoing executive committee on Monday the 21st July 1958.

It gives me pleasure to mention here that this year, under the auspices of the Madras Veterinary College Association some of the eminent people addressed our meeting and our Association played the part of host for conducting the Inter-collegiate debate in English for both United Nations Students' Association (U. N. S. A) and the Madras College Students' Council (M C.S.C.). By this our college students gained increased popularity among the city colleges.

As usual we took part in the "Quiz" programme conducted by the All India Radio and The Madras College Students' Council. Our students have taken part in Inter-collegiate oratorical contests conducted by the various colleges and other organisations like United Nations Students' Association and the Madras College Students' Council. We also took part in the inter-collegiate music competition.

Our College Association is affiliated to the Madras College Students' Council, Madras Students' Adult Education Council, Madras

College Social Service League, United Nations Students' Association, All India Veterinary Students' Association and to the World University Service.

The popularity of our college increased by our college students holding responsible position in various organisations as shown below:

1. Sri V. Visvanathan—Joint Secretary, The Madras College Students' Council.
2. Sri Shaari Bin Ishak — President — Malayan Association, Madras.
3. Sri S. Indrasekaran — Sports and Games Secretary—Malayan Association, Madras.
4. Sri A. Nagaratnam—Asst. Treasurer, Malayan Students' Association.
5. Sri M. Arokiasamy — Editor and member for publication — Overseas Students' Association, Madras.
6. Sri P. J. George—Executive member, International Students' Association, Madras.
7. Sri Ch. Chanda Rao — Treasurer, Andhra Vidyarthi Vignana Samiti, Madras.
8. Sri S. S. Rama Rao — President, Advisory Board of Andhra Vidyarthi Vignana Samiti, Madras.

19— 7—58 Election of office bearers of the Madras Veterinary College Association.

26— 7—58 There was a trip to Integral Coach Factory, Perambur, Madras. About 50 students participated.

30— 7—58 Film Show No. 1.—By the kind courtesy of the United Nations Information Service, the following films were screened at "Swarajya Hall".
1. University of California
2. Sputnic
3. International House

2— 8—58 There was an excursion to the bird sanctuary 'Vedanthangal' Thirukazhukunram and Mahabalipuram. 48 students and two members of the staff joined the excursion party.

5— 8—58 Inaugural Address—The Inaugural address of our Association was delivered by Dr. U. Krishna Rao, Speaker of Legislative Assembly, Madras in Swarajya Hall at 5-30 p.m. Dr. Berte A. D'Souza, Principal presided. Student Chairman gave concluding remarks and the Secretary proposed the vote of thanks.

10— 8—58 There was a trip to All India Radio Broadcasting Station—About 50 members participated and studied in detail the Studio and transmitting Station.

11— 8—58 There was a Magic performance by Rajasekhar at Central Hall — About 60 members attended and enjoyed the performance.

14— 8— 58 Film Show No. 2.—By the kind courtesy of Turist Information Service—films of professional interest were screened. On the same evening a student from Switzerland who is under cycle tour of Asia and America gave a talk on his touring experience of India.

15— 8—58 Independence Day—The 11th Anniversary of the Independence Day was celebrated. The celebration commenced with the salutation of Flag at 9-30 a.m. After that there was a meeting at Swarajya Hall. Prof. M. Rathnasami, Bar-at-

law, Ex-Vice-Chancelar, Annamalai University addressed the gathering — Dr. Bertie A. D'Souza, Principal welcomed the guest and Sri V. Visvanathan, Student Chairman presided over the meeting. The student secretary proposed the vote of thanks.

20— 8—58 Graduates Reception — A reception in honour of the new graduates was held on Wednesday the 20th August 1958. Dr. Thomas W. Simon, American Consul General, addressed the new graduates. Dr. Bertie A. D'Souza, Principal of our college presided. Sri V. Viswanathan, student chairman proposed the toast in honour of the new graduates and Sri Jothi Ranganathan and Sri Khan who were new graduates replied suitably on behalf of the new graduates. There was a variety entertainment. Sri S. Antony Doss, Secretary, proposed the vote of thanks and the function came to an end with the National Anthem.

28— 8—58 Reception and Farewell Party : A Farewell party to Dr. Bertie A. D'Souza, Principal, Dr. D. Mariappa, Professor of Anatomy and Reception to Dr. V. N. Govindan Nair, Professor of Physiology was arranged at the college premises. Sri V. Viswanathan, Student chairman presided and Sri J. Antony Doss, Secretary, proposed the vote of thanks. Film Show No. 3.—The M.M. film "All the brothers were vallient" was screened to entertain the gathering.

8— 9—58 Film Show No. 4.—By the kind courtesy of Tea Board — there was a film show at central hall. Films of professional interest were shown.

8— 9—58 Inauguration of Tamil section of Madras Veterinary College Association : Sri C. Rajagopalachariar, Former Governor General of India delivered the Inaugural address. Dr. M. C. Chellam, Professor of Gynaecology presided. Sri V. Nagarajan, Secretary proposed the vote of thanks.

4—10—58 Wild life day : Wild life day was celebrated. Sri M. V. Krishnappa, Union Deputy Minister for Food and Agriculture spoke on wild life preservation. Dr. I. D. Mantramurti, Principal presided over the function. Film Show No. 5. on the same evening a film show on preservation of wild life was screened.

11—10—58 Inter class debate in Tamil— The Tamil section of Madras Veterinary College Association conducted an interclass debate. Dr. Alwar and Dr. Ranganathan acted as judges. Mr. Nachiappan and Mr. Rangasamy were declared as I & II respectively.

13—10—58 An ordinary meeting of Madras Veterinary College Association was held on 13—10—58. Dr. I. D. Wilson—T. C. M. expert from Izatnagar, addressed the gathering. Dr. I. D. Mantra-

murti, Principal, presided.

14—10—58 Film Show No. 6: By the kind courtesy of U.S.I.S. the following films were screened : (1) Web of life. (2) Play Basket Ball. (3) Hay making.

20—10—58 Inauguration of the United Nations Students' Association and Inter-collegiate debate in English—The Madras Veterinary College Association played host to United Nations Students' Association in conducting their inaugural function. Dr. T. Chengalvarayan, Ex-Mayor of Madras delivered the inaugural address. Mr. M. Kandaswamy of Law College President of United Nations Students' Association presided. Mr. Shanker Haridass, Secretary, U.N S.A., proposed the vote of thanks. This was followed by the Inter-collegiate debate in English at 5–30 p.m. at "Swarjya Hall". Miss. S. Vijayalakshmi of P. S. P. Party and Mr. V. P. Rajan, Asst. Editor, Madras Mail, acted as judges. About 13 colleges of the city participated in the debate.

23—10—58 Tamil section of the Madras Veterinary College Association conducted an Interclass essay competition in Tamil to celebrate Barathiar Day. Dr. V. S. Alwar Dr. M. Ranganathan and Dr. A. R. Vedanayagam acted as judges.

24—10—58 United Nations Day celebrations : The United Nations Day was celebrated at "Swarajya Hall" Dr. E. J. Long, Ph.D., Group Leader, Tenessee Team addressed the gathering. Dr. P. V. Cherian, Chariman of the Legislative Council presided. Dr. I. D. Mantramurti, our Principal welcomed the guests.

17—11—58 Literary Festival :-The literary festival of the Madras Veterinary College Association which was introduced for the first time was celebrated in the III week of November. The Inter class essay competition was held on Monday 17—11—58 at 5 p.m. Messrs B. Narasinga Rai, G.M.V.C., B.V.Sc., D.T.V.Sc., V. S. Alwar, G.M.V.C., B.V.Sc., M.Sc., and V. Ratnasabapathy, G.M.V.C., B.V.Sc., Ph.D., acted as judges. Sri S. Ramachandran and Mahadevan Pillai were adjudged I and II respectively.

19—11—58 The Inter-collegiate debate in English : Dr. C. N. Stark, P.hD., Dr. K. N. Govindhan Nayar, G.M.V.C., M.S. (Ten)., Sri C. K. Velayudhan Nair, G.M.V.C. acted as judges. Sri P. J. George and Sri S. Ramachandran were adjudged as I and II respectively.

20—11—58 The Interclass Quiz in English: Sri K. P. Chandrasekharan Nair, G.M.V.C., B.V.Sc., Sri M. Anantaraman, M.A., M.Sc., F.Z.S., Sri D. A. Victor, G.M.V.C., B.V.Sc., acted as judges. Sri P. J. George and Sri W. Corera were adjudged as I and II respectively.

24—11—58 Inter-collegiate debate in English : The Madras Veterinary College Association played the host to the Madras College

Madras Veterinary College Association, 1958—'59

Sitting Left to Right :—Narasimhalu Naidu, C. M., *Treasurer* ; Loganathan, T. R., *Asst. Secretary* ; Balraj, D., *Editor* ; Sri Anantharaman, M., *Adviser* ; Dr. Mantramurti, I. D., *President* ; Dr. Chandrasekharan Nair, K. P., *Vice-President* ; Dr. Velayudhan Nair, C. K., *Adviser* ; Visvanathan, V., *Student-Chairman* ; Priscilla Asirvatham, *Lady Rep.*

Standing Left to Right :—Subramanyam, P., *Rep. 1st Yr.* ; Nachiappan, D., *Convenor* ; Parthasarathy, S. C., *Rep. 4th Yr.* ; Solaimalai, A., *Associate Editor* ; Mahindar Singh, *Rep. 1st Yr.* ; Srinivasulu Reddy, K., *Rep. 4th Yr.* ; Govindaraju, S. N., *Rep. 2nd Yr.*; Appaji Rao, V. N., *Rep. 2nd Yr.* ; Kathaperumal, V., *Rep. 3rd Yr.* ; Chandrasekaran, M., *Rep. 3rd Yr.*

Madras Veterinary College Athletic Association 1958—'59

Students' Council to conduct their Inter-collegiate debate in English at "Swarajya Hall". Srimathi Jothi Venkatachalam, former Minister, and Sri M. P. Shanmugam, Professor of History, Pachaiyappa's College, acted as judges. About 16 colleges participated. The rolling shield was won by the Queen Mary's College by the joint effort of Miss Nirmala Swamidass and Miss Ushakeeran. The best lady competition prize was won by Miss Ushakeeran of Queen Mary's College. The I and II prizes were won by Sri Muthukrishnan of Madras Institute of Technology and Sri Federick Vaz of Loyola College respectively.

It is with great pleasure that we record our sincere thanks to our Presidents, Dr. Bertie A. D'Souza and Dr. I. D. Mantramurti for their fatherly advice and valuable guidance. They are very keenly interested in the activities of the Association. We heartily thank our Association Vice-President, Dr. K. P. Chandrasekharan Nair, for his valuable suggestions and guidance. We also thank our advisers Dr. M. Anantaraman, and Dr. C. K. Velayuthan Nair for their valuable advice.

Lastly, I wish to thank all the members of the Association including the staff and office bearers for their splendid co-operation extended to us, without which we could not have accomplished anything.

As our College Magazine is to be published in the month of March itself, unlike other years, I am here unable to give a complete report of the activities of the academic year. I am sure a supplementary report in the next issue will provide you with full information. In giving this report I take the opportunity of requesting the kind co-operation of staff and students to proceed on with the rest of the activities of this year. Thank you.

Long Live M. V. C. Association.

WEAPON OF WAR

Someone asked Mr. Einstein one day what kind of weapons would be used in the third world war. "Well," he answered, "I don't know what they are developing, because things are progressing so rapidly, but I can tell you what they 'll use in the fourth world war," he said "They 'll use rocks."

—J. William Fulbright, United States senator from Arkansas

The Madras Veterinary College Clinical Club

Report for the year 1958-59

P. V. G. V. Balakrishna Rao,
Secretary

OFFICE BEARERS

Chairman :
Sri S. Diwakaran, Final year.

Secretary :
Sri P. V. G. V. Balakrishna Rao, Final year.

Treasurer :
Sri P. Basavayya, III year.

Class representatives :
Sri M. Mahadevan Pillai, Final year.
Sri R. Narendranath, III year.

DURING the year under report the activities of the club commenced a little late. The election of the office bearers took place in the first week of September, 1958. The club activities for the year were inaugurated by our new Principal, Dr. I. D. Mantramurti, G M.V.C , B.V.SC., on 4—11—'58. In his inaugural address the Principal stressed on the importance of Clinical Club and exhorted the students to take a lively interest and develop a keen observation in the follow-up of cases at the Clinics. He also emphasised the necessity to maintain high ideals and set good traditions in the deliberations of the Club. Though we started very late this year, as already stated, I am happy to report that in a short period of one month from 4—11—'58 to 4—12—'58 we have been able to meet 4 times. The following is the diary of activities :

4—11—'58 (I Meeting)

President :
Mr. S. Diwakaran, Final year.

Speaker :
Mr. B. N. Souri, Final year.

Subject :
Anthrax.

Discussion opened by :
Mr. S. Ramachandran, Final year.

15—11—'58 (II Meeting)

President :
Mr. Radha Ramakrishna Reddy, Final year.

Speaker :
Mr. Hiralal Gurutoo, Final year.

Subject :
Bovine Mastitis.

Discussion opened by :
Mr. P. V. G. V. Balakrishna Rao, Final year.

26—11—'58 (III Meeting)

President :
Mr. Ivan, T. D. Final year.

Speaker :
Mr. R. A. Venkatesan, Final year.

Subject :
Tetanus.

Discussion opened by :
Mr. Sankarasubramanyam.

4—12—'58 (IV Meeting)

President :
Mr. I. S. Prakasha Rao, Final year.

Speaker :
Mr. S. Ramachandran, Final year.

Subject :
Eczema in Canines.

Discussion opened by :
1. S. Diwakaran.
2. Sankarasubramanyam.

The current year is important in the history of our College because it is during this year that the M.V.Sc., Degree Course was instituted. I am very proud to record that all M.V.Sc., students have enrolled themselves as members of the Clinical Club.

The keen interest of the members in the activities of the Clinical Club is praise-worthy this year and I am sure that this will be continued in future too. It gives me great pleasure to record that the present III year students are also showing keen interest in the activities of the club.

I thank the Principal for his great interest in the activities of the club and for having graced every meeting with his presence. I also thank the respected staff members for their kind co-operation and guidance at every stage.

I am sure that if the same co-operation is continued from both the staff and the members of the club, more number of meetings can be conducted before the end of this year thus breaking all the previous years' records.

All problems become smaller if you don't dodge them but confront them. Touch a thistle timidly, and it pricks you; grasp it boldly, and its spines crumble.

The lowest ebb is the turn of the tide.

Anyone can carry his burden, however hard until nightfall.

Anyone can do his work, however hard, for one day.

—*R. L. Stevenson.*

Madras College Students' Council

V. Visvanathan,

Final year B.V.Sc., Joint Secretary

I AM VERY happy to present a brief report about my activities and that of my colleague Sri T. D. Prabakar, who visited Delhi during the first week of November 1958 to participate in the celebrations of the National Council of University Students of India (N.C.U.S.I.)

On the 31st of October '58 the members of the Executive Committee of Madras College Students' Council excluding the Lady Joint Secretary and Editor held a discussion on the forthcoming N.C.U.S.I. meeting with a view to elect two student members representing Madras University. The conference was held in the campus of the Delhi University from 4th to 6th November. The Executive Committee also decided to send both of us to represent the Madras College Students' Council at the conference. We reached Delhi on the 4th of November, just in time for the meeting. Fourteen Universities were represented in the conference. The delegates had discussions on the consititution and many a useful amendment was made. This was followed up by the election of office-bearers. Madras was fortunate in getting one of its members elected to the Secretaryship of the National body. Madras was also entrusted with the responsibility of conducting the inter-university seminar on the "Role of Students' Union in the life of students" during the month of January '59 and I was asked to be the convenor for the same.

Madras was also charged with the responsibility of forming a Committee from among its members with a view to evolve and submit a report on the present day University Examinations in India and to suggest if necessary suitable modifications within a period of two months. The report when placed in the hands of the Executive of National Body will be dealt with by it and the matter taken up with the higher authorities.

Happily the date of this conference coincided with such remarkable and spectacular activities like the Inter-University Youth Festival, the India '58 exhibition and the like. Delhi City was virtually replete with entertainments of all kinds. It was during this time the centre of activities and people drawn from all parts of the world could be seen there in good numbers.

Mr. T. D. Prabakar, the Treasurer, and I were singularly lucky in the opportunity that came our way of meeting the Great Prime Minister of India at his residence on Friday the 7th November. He was kind enough to pose with us for a photograph.

The weather at Delhi was pleasant. We returned to Madras on 9–11–58 after a very educative, enjoyable and useful trip.

It is easy to look down on others; to look down on ourselves is difficult.

—Mark Twain.

Madras Veterinary College Hostel

R. Chinna Raj,
General Secretary

I HAVE great pleasure in introducing before you a brief account of the achievements and activities of Madras Veterinary College Hostel during the academic year 1958-59.

The Hostel re-opened on the first of July 1958 after summer vacation and rooms were allotted to the members. All the hostel members burst into activities as soon as the election of the different office-bearers was announced and the contesting candidates started their active propaganda work. The customary election was conducted on 29th July by secret ballot. The following office-bearers were elected :—

General Secretary :
R. Chinnaraj

Sports Secretary :
S. Danabalachandran

Radio Secretary :
T. V. Hanumantha Rao

Garden Secretary :
V. L. Subramaniam

Block Secretaries :
M. Chennakesavalu
T. K. Divakaran
T. N. Arunachalam
N. Natarajan, B.Sc.

The activities of the office-bearers were upto the standard and they did their maximum to provide facilities for the members in recreation, indoor and outdoor games. The members were given medical facilities through the help of our hostel doctor.

As a custom the general body meeting used to meet at the end of every month and the secretaries for the messes for the next month will be elected. The hostel messes have been running on strict democratic basis. I am very happy to present the marked improvements of the dining halls with fans and fluorescent lights. I am sure, it is not an exaggeration when I say that any one will feel very happy when he pops into the dining hall.

On the Independence day, the First year students were given a ceremonial ducking from 9 a.m. to 12-30 p.m. At 8 p.m. the Independence day Open air dinner was arranged in a grand fashion. Prof. Ruthanaswamy, Ex-Vice-Chancellor of Annamalai University was our chief guest.

The new graduates were entertained after the graduates reception. Another open air dinner was arranged in honour of Dr. Bertie A. D'Souza our former Principal and Dr. D. Mariappa, Professor of Anatomy who left for U.S.A. for advanced studies. And also, the party welcomed Dr. K. N. Govindan Nayar, Professor of Physiology, who returned from States after obtaining a Post-Graduate Degree.

We are happy to have Dr. I. D. Mantramurti as our Principal. His keen interest in the curricular and extracurricular activities and his ability to understand the psychology of students is remarkable.

We felt very sorry when we read the relinquishing declaration of our former Warden, Dr. M. S. Ganapathy, and Asst. Warden,

Dr. R. H. Sundaram, whose genuine efforts had been giving life to the hostel year after year. Our happiness was beyond leaps and bounds when we came to know of the appointment of Dr. B. Narasinga Rai, as our Warden, a strict disciplinarian, and Dr. V. Satchidanandham, as our Asst. Warden, a man of principles.

A well-equipped tennis court has been started in the premises of our hostel to provide facilities for members to train themselves. It is worthy to mention in the history of the Madras Veterinary College Hostel, that the inter class boxing tournaments were conducted under flood light in a grand manner. The presence of our Principal, Dr. I. D. Mantramurti was an evidence for his interest in games.

Hostel members once more boomed into activity when the hostel day tournaments were conducted. The standard of games has been increasing day by day.

On 10th December, Hostel day and the Inauguration of the new buildings were celebrated. Hon'ble Sri M. Bakthavatsalam, B.A., B.L., Minister for Home and Agriculture, Government of Madras, presided over the function and Hon'ble C. Subramaniam, B.A., B.L., Minister for Finance and Education, Government of Madras, declared open the new buildings. It is a Red letter day in the history of the Madras Veterinary College Hostel. Though Nature was little unkind to us, the function went on smoothly. The new building with its fine quadrangle inside is indeed a sight to see. There are 48 single rooms, 101 double rooms, one office room, two common rooms and four guest rooms furnished with fans.

The long-felt need of the members of the Hostel has been rewarded in time and our thanks are due to those who made every inch of the effort to achieve the goal, the *New Buildings*. Our thanks are due to Dr. Bertie A. D'Souza, our former Principal whose special effort made the authorities have a new building for accommodation of 250 students. Also our thanks are due to Dr. I. D. Mantramurti, Principal, Madras Veterinary College for obtaining the various facilities in this new block.

We owe our enviable life here in the hostel to the unselfish efforts and able administration of our benevolent Principal, kind Warden and active Asst. Warden.

My sincere thanks are due to all the office bearers, several volunteers of various committees formed for the Hostel Day celebration and to all the members of the hostel for their kind co-operation.

ONE LONG HOLIDAY

A lesson I have learned from life is the recreational value of having several occupations. I never need a holiday because I am never in a rut on one set of rails. My holiday consists of doing something different and I have several holidays a day.

—*Commander Sir Stephen King.*

Madras Veterinary College Athletic Association

REPORT FOR THE YEAR 1958-'59

P. U. Narayanan,

Physical Director

THE inaugural meeting of the Association was held on 16—7—'58. It was presided over by the Principal Dr. Bertie A. D'Souza the Ex-officio President of the Association. Dr. F. D. Wilson, Professor of Surgery was nominated to continue as the Sports Secretary for the fourth term. The General Body elected the following as the Captains for various games.

Games	*Captains*
Hockey	A. G. Basker Singh
Foot-ball	J. Bhojan
Cricket	N. Balasubramanian
Basket-ball	T. V. Varadarajan
Volley-ball	R. Chinnaraj
Badminton	A. Sadasiva Shetty
Boxing	A. S. Stanley
Tennis	Shaari Bin Ishak

Thomas Amaldoss was elected as the general Captain for the year without any contest.

Inter-collegiate competition: Although we were denied the facilities of our regular playing ground and the chances for practice games were curtailed, all the teams with the exception of the Badminton team entered for the Inter-collegiate league competitions. Generally the performances were rather disappointing compared to previous years with the solitary splendid exception of the hockey team which has reached the finals in the Stokes Shield tournament. They have once again met our old antagonists, the Loyola College team, early in January without any practice immediatly after the X'mas vacation and lost by a narrow margin, much to everybody's disappointment. The credit for our Hockey team's good performence, I should think, was in a large measure due to the enthusiasm of the Hockey Captain — A. G. Basker Singh, who has arranged many practice matches during the early part of the season.

Knock-out tournaments: Only the hockey team was entered for the Stokes Shield and the Principal Krishnamoorty hockey tournaments conducted by the Pachaiyappas College. In the latter competition we lost by the narrowest margin of a solitary goal to the Loyola College. In the Stokes Shield by virtue of its splendid victory against Pachaiyappas, Engineering & the Law College the hockey team reached the finals where it has lost once again with the Loyola College team.

Inter-class tournaments: When the Madras Collegiate Athletic Association decided against the holding of the Inter-collegiate Boxing tournaments our college boxers were disappointed a great deal. But this was remedied to a great measure by holding the Inter-Class boxing championship for the *Khan's Shield* in a grand scale hitherto unattempted. A pucca ring with floodlights and announcing system was put up in the hostel premises and well known local boxers acted as referees. The fights were keen and the attendance throughout was very great. In this connection I cannot sufficiently thank Dr. I. D. Mantramurti, our sportsman Princ pal for all the kind help and encouragement he gave. A start has been made in other games also and

they will be completed in the first week of January 1959.

Our thanks are due to our esteemed Director of Animal Husbandry, Dr. D. Pattabiraman, who had kindly sanctioned the laying of two new Tennis Courts within the hostel premises. With the starting of the Post-Graduate Research Training Centre and the erection of many new buildings in the College, the old Tennis Courts within the College premises have been squeezed out of existence and we have been forced to move over to the new courts laid in the college hostel.

CRICKET

N. BALASUBRAMANIAM

Cricket Captain

The College Cricket team entered the Inter Collegiate tournament this year thus breaking a sequence of non-participitation in any tournament for the last few years.

It was a pity that the full programme of matches could not be gone through, for various reasons, the team withdrawing after playing three matches. We pulled off a remarkable win in this short interlude of cricket and I daresay we could have gone far if the programme had been completed, for we had a most enthusiastic band of youngsters who played the game as it should be played. We played a few practice matches as well and could have had more of it but for the non-availability of our college grounds.

What little was achieved was no doubt in great measure due to the encouragement of our Sports Secretary and the Physical Director and I take this opportunity to thank them on behalf of my team.

I wish my successors many happy hours of Cricket in the Coming Years.

HOCKEY

A. G. BHASKER SINGH,

Captain

As usual we started our enthusiastic session with a series of practice matches. The first inter-collegiate league match was against Presidency College and we won by a single goal. We played the other league matches and we lost in our zone. The match against Law College was a thrilling one and we lost by a solitary goal.

I am glad to mention that our standard is improving day by day and I am proud that we have reached the Inter-collegiate knockout finals. The semi-finals match against Law College was an unforgettable one which we won by a single goal. We played the Principal Krishnamoorty Tournament but we lost to Loyola College. Though we are not having a ground of our own this year our performance has not gone down as we feared in the beginning of the year.

The newcomers Alfred Dawsan, Indrashekaran, Ponnappa, Hiralal Gurtoo and our custodian Samuel Dawsan showed signs of great promise. Special mention may be made about our University player Rajkumar Solomon, old players Dr. Somaiah, Medappa, Mahamed Mathar, Manoharadas Johnson, Abraham Manikraj and Jayachandran for their grand performances. I thank one and all of the players for their kind co-operation and help.

I thank our Principal, Dr. I. D. Mantramurti, for his keen interest and lively guidance in every respect for the betterment of the team. My sincere thanks to our Sports Secretary Dr. F. D. Wilson for his all-round encouragement in the field of Hockey. Last but not least I thank our Physical Director Mr. P. U. Narayan for his excellent coaching and interest in the field.

Here's all the best to my successors.

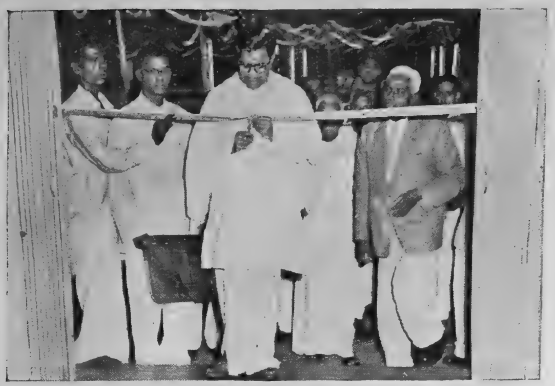
BADMINTON

A. SADASIVA SHETTY, II YEAR

Captain

At the outset I must express my sense of pride in being the captain of such a fine band of players.

INAUGURATION OF OUR NEW HOSTEL



The Hon'ble Finance Minister Sri C. Subramaniam inaugurates the New Hostel

Our New Hostel

Chief guests at the Party

G. Koil Pillai III yr. B.V.Sc. represented "Mr. Madras" Best Physique Competition

Aerial view of Boxing Ring in the Hostel premises during the interclass Tournament

Our Team played two friendly matches against the G.C.I.M., the honours being even. Then we took on the powerful "Thambi Vilas" team and put up a creditable show.

In the Aboobaker Tournament we lost to the Law College, after a bitter struggle and even in defeat our defence was acclaimed by the enthusiastic spectators.

While it might be invidious to name particularly the performance of a few players, I cannot but place on record the uniformly good display given by Joseph Andrew, Govindarajan, Thirunavukkarasu and Dhanabalachandran.

I extend my sincere wishes for a better season to my successor. Good bye and Good luck.

FOOT BALL

J. BHOJAN,
Captain

In the past our College foot-ball team had set up fine traditions and deservedly took a place of pride among the leading College teams. During the year under report I have to admit that our team has performed indiferently. Far from furnishing alibi for our failure I venture to state that the non-availability of our regular ground and disability of V. P. Sridharan, our Short anchor from taking part in any match, contributed not a little to the poor show put up by our boys.

Team work and co-ordination were totally absent and our leading goal-getters Amaldoss, Naidu, and Chellakumar were leg-weary and goal-shy even at the commencement of the season. Our poor showing in the league was hence natural. We did not enter the knock-out tournament.

Inevitably any team passes through a period of crisis and I think that this is the lean year for our foot-ballers. That the coming vets. may put up better show and raise our team's name to its pristine glory is my ardent hope.

I wish my successor all luck.

VOLLEY BALL

CHINNA RAJ,
Captain

In the five matches we played in the Inter-Collegiate league we won against New College and Integrated Medicine. We lost to Madras Medical College, Christian College and Loyola College after giving a very tough fight. This year our college team is strengthened by the addition of Kittappan and Ragupathi. Our specialist in the field are Unwin Noah with his powerful spikings and Kittappan for his defence game. I wish my successors will show substancial improvement by intensive practice.

I thank my players for the kind co-operation they have extended to me in making this season a grand success. I take this opportunity on behalf of the team to thank the Sports Secretary Dr. F. D. Wilson and Physical Director Sri P. U. Narayan for the keen interest they have taken in us.

BOXING

MD. GHOUSULLAH,
Captain

This year we had a very good team consisting of young, enthusiastic and tough boxers.

Our training started in the month of August with Mr. Purushothaman, (University Boxer) a representative of the Southern Railway in the All India Railway inter-Railway boxing tournament, as our coach. Unfortunately we could not get him last year since he was not in Madras. But this year my thanks are due to him for the services to our team. We elected Mr. A. S. Stanley of III year as our efficient leader, the captain of the team, but due to his absence I had to take up his place.

As last year the Inter-collegiate boxing tournament ended abruptly, this year it was altogether cancelled, but it is expected that the University of Madras may send a team to

participate in the Inter-University Boxing tournament.

Since we did not have the Inter-collegiate tournament, our Principal and Sports Secretary did not like to disappoint the anxious youngsters and thus we were all given a chance to exhibit our talents in the Inter-class Boxing tournament. The standards and the way in which it was conducted was no less than the Inter-collegiate level.

Our Inter-Class tournament: Our Inter-class boxing tournament this year was conducted in a very grand and colourful manner under the flood-light arrangements with loud speakers for announcements.

It was the courtesy of our Principal in permitting our Physical Director to conduct the tournament on grand scale.

I shall now briefly describe the bouts and their results in various classes of weights :

1. Junior wt. class : Govindarajan of III year (An Inter-collegiate boxer) had an easy time in winning over Govindarajulu of the same year in a T.K.O.

2. Pin wt. class : Jayaraj of II year to my great surprise proved himself really fit enough to beat Subramaniam of III year and in the finals to win over Sambamurthy of III year. Jayaraj is the winner in the class with Sambamurthi as runner-up.

3. In light fly wt. class (paper wt.) we had an interesting fight between Rajasekaran of III year and Thiagarajan of I year, the latter being the winner and finally Thiagarajan of I year was runner since he met me. I came to the final beating Krishnamurthi of III year.

4. In the fly wt. class : S. C. Parthasarathy of final year B.V.Sc. could, though not with much ease beat Daniel of I year who gave a real rough fight to his opponent. Julius Daniel was declared as the best loser and given a special prize for the same.

5. In the bantam wt. class : George of II year had a hard time in winning over Surendra Babu of III year. Next George got a walk over from C. S. Kasturi of Final year. In the other round Bhoosan Raj of I year came to final by getting a walk over from Nallian of II year. Of the George-Bhooshan Raj fight in the finals George was the winner being a better experienced boxer. I hope that Bhooshan Raj, Julius Daniel and Thiagarajan will definitely prove to be good boxers if they keep in constant practice.

6. In feather wt. class : Govinda Reddy of I year got a walk over in semifinals from S. Dhanabalachandran of final year and he proved himself superior by winning over another hard, tough boxer Nachiappan of the same class. Nachiappan beat V. S. Parthasarathy in semi finals.

7. In the light wt. class : Chandrasekaran of III year a seasoned boxer could easily beat Ranganathan, K. V. of final year who of course was a tough opponent but unluckily got his muscle pulled during the 2nd round.

8. In the welter wt. class Ramasamy of II year beat Shaari Bin Ishak in the finals. Shaari Bin Ishak beat Joseph Andre of I year in the semifinals.

Ramasamy was given the best winner prize.

9. In the middle wt. class Koil Pillai of III year another seasoned boxer could with no much difficulty beat Ramachandran of the same year who reached finals by winning over Maheshchandersharma of final year.

In addition to this there were some exhibition bouts in the following order.

1. Chandrasekharan Vs C. Purushothaman (Coach)
2. Koil Pillai Vs -do-
3. Y. N. Ramaswamy Vs Vijayakumar of Pachaiyappa's College, Ex-University Captain.
4. R. Solomon Vs Govindarajan

5. Ghousulla Hussain Vs
Chandrasekharan, R.

As a captain I shall thank our beloved Principal for his kind permission in conducting the tournament so early and making all free for our studies for the examinations. Also I thank him for having been present in the final day of our tournaments and keenly watching and encouraging the boxers and finally being so kind enough to distribute the certificates to the winners and runners-up.

I should thank our Sports Secretary for encouraging all the boxers and sports in general. He was one of the judges and I am proud to say that he could act as an efficient refree too for some of the bouts.

Then I shall thank our Physical Director Sri P. U. Narayanan for taking all pains to run up to Engineering College to get the necessary things in making lighting and loud speaker arrangements and thus making all necessary arrangement to make the function a grand success.

First day we had, Mr. Gunasekaran of Vepery as refree along with Dr. F. D. Wilson and Sri C. Purushotham. Next day we had Mr. Vijayakumar, our Ex. University Captain and Champion in Welter wt. class in the inter University Championship in 1957 at Bombay. He gave an exhibition bout too, fighting against Ramasamy, our best winner of the year.

The III years won the team championship with 10 points and second year came second with 9 points and final year third with 5 points.

I shall thank the members of the boxing team who had been regular to the practice classes and made all efforts to put a grand show in the tournaments. I wish them all success.

The Madras Veterinary College Planning Forum

Dr. V. Rathnasabapathy,
Secretary

IN pursuance of a letter from the Government of India Planning Commission, a planning forum was constituted at this College on 14—8—57 with all the students and staff as members. The following office bearers were elected for the year 1958–'59.

Chairman : Dr. Bertie A. D'Souza
Vice-Chairman : Dr. D. Mariappa
Secretary : Dr. V. Mahadevan

EXECUTIVE COMMITTEE

Staff : Dr. M. Dharmarajan
„ M. S. Ganapathy
„ K. P. Chandrasekharan
„ C. K. Velayudhan Nair
„ F. D. Wilson
„ R. D. Michael
„ D. A. Victor
„ M. Ranganathan

STUDENTS

I year class : Henry Gnaniah
Sahabuddin, A.
II year class : Manohar Das Johnson
Chennakesavalu, M.
III year class : Stanely, A. S.
Lalitha, P. S.
IV year class : Chockalingam, V.
Balraj, D.

Since the Chairman and Vice-Chairman had to leave for the United States in September 1958, the newly appointed Principal Dr. I. D. Mantramurti and Dr. M. Dharmarajan assumed charges as Chairman and Vice-Chairman respectively. Dr. V. Mahadevan on appointment as Head of the Nutrition Department, Indian Veterinary Research Institute, Izatnagar, had to relinquish the Secretaryship and Dr. V. Rathnasabapathy was elected Secretary for the rest of the year.

The activities of the Planning Forum during the year are as follows :

13— 9—57 Inaugural address by Sri M. G. Rajaram, I. A. S., Additional Development Commissioner to Government of Madras.

25— 8—58 Address by Dr. D. Pattabiraman, Director of Animal Hunbandry, Madras. Symposium on "Causes of recent rise in Agricultural prices.

13— 9—58 Celebration on National Plan Day — Address by Dr. S. Chandrasekharan.
In the Essay Contest on "Production of more milk" held in this connection, Sri S. Ramachandran, Sri V. Nagarajan and Mr. Habibur Rahiman won the 1st, 2nd and 3rd places respectively.

The members joined the Small Savings Drive organized by the Regional Small Savings Officer and 363 students and staff members contributed Rs. 2,145 in the campaign. For the largest number of participants, this College was adjudged the first among the City Colleges and was awarded the College trophy and also the individual Cup for the best student participant.

Announcement

INDIAN COUNCIL OF AGRICULTURAL RESEARCH
BOOKS ON AGRICULTURE

AGRICULTURE and Animal Husbandry in India. By M. S. Randhawa; 364 pp. 117 illustrations 11¼" x 8½" (1958) Rs. 15-00, Overseas $ 5-00 Sh. 36. This book brings together for the first time information on national scale on all important components of Indian Agriculture. Its 50 chapters and 117 illustrations cover a vast field and give a comprehensive account of India's geological past, physical features, soils, climate, vegetation, irrigation works, agricultural holdings, crops, farm animals and fisheries.

"I am sure this book will serve as a standard work of reference to all persons, whether officials or non-official, who are interested in Agriculture and its development".

SHRI AJIT PRASAD JAIN,
Minister for Food and Agriculture,
Government of India

The Mango by S. R. Gangoli et al: This first authoritative monograph on India's most important fruit deals with history, botany and varieties of fruit. Detailed description of 210 varieties contained in the book will prove invaluable to horticulturists. It also gives an outline of mango culture as practiced in advanced orchards and embodies important results of carefully conducted research. (530 pp. 213 coloured plates, 65 Black and White illustrations). Rs. 40-00 $ 12-00 Sh. 85.

Grassland and Fodder Resources of India by R. O. Whyte: It reviews the present knowledge and experience on the nature and utilization of the grazing and fodder resources and relates this information to other branches of land utilization, agriculture, animal husbandry and forestry, in India. (437 pp., 50 plates) Rs. 16-00 $ 5-00 Sh. 36.

Statistical Methods for Agricultural workers by V. G. Panse & P. V. Sukhatme: This book, dealing with statistical methods and design of experiments as applied to agriculture, will meet the day to day needs of the agricultural and other biological research workers and will serve as a suitable text for students. (361 pp.) Rs. 15-00 $ 5-00 Sh. 36.

Agricultural Research in India—Institutes and organization by M. S. Randhawa: It presents a connected account of all agricultural research institutions and organizations in this country. (450 pp.) Rs. 20·00 $ 6·00 Sh. 36.

Flowering trees in India by M. S. Randhawa: This book contains a delightful account of flowering trees in India and will be useful as a work of reference to students, scientists, gardeners, town planners as well as administrators. (210 pp. 39 Colour Plates) Rs. 15-00 $ 5-00 Sh. 36.

Copies available from: The Business Manager, Indian Council of Agricultural Research, New Delhi.

Under Secretary,
I. C. A. R.

A Short note on the report on improvement of indigenous and imported implements and their popularisation Published by the Indian Council of Agricultural Research, New Delhi.

A survey of indegenous agricultural implements in the country was sponsored by the Indian Council of Agricultural Research. 552 indegeneous implements of different parts of the country were surveyed. A list of imported implements found very suitable for popularisation in India has been furnished in the report. A "Buyer's guide for Agricultural Implements" was also published by the Indian Council of Agricultural Research for use of farmers. A list of recently imported implements which are now under test by the Division of Agricultural Engineering is also appended to the report. All the implements and machines in the country are collected, and exhibited in the Museum at Indian Agricultural Research Institute, New Delhi. Research on the development, of new machines is also taken up by the Division. It is reported that manufacture of fodder cutters and other useful devices are taken up on a large scale in this country for supply to cultivators. For further particulars, please refer to "Head of the Division of Agricultural Engineering" Indian Council of Agricultural Research, New Delhi.

G. V. RAMANA
Lecturer in Agriculture, M. V. C

Our Mail

INLAND

MADRAS

1. Agriculture College, Coimbatore.
2. Alagappa Chettiar College of Technology, Madras.
3. American College, Madurai.
4. Arts College, Madras.
5. Central Polytechnic, Madras.
6. College of Engineering, Guindy.
7. Connemara Library, Madras.
8. Director of Animal Husbandry Dept.
9. Director, King Institute.
10. Ethiraj College.
11. Government College, Kumbakonam.
12. Indian Veterinary Journal.
13. Institute of Veterinary Preventive Medicine, Ranipet.
14. Jain College.
15. Lady Wellington Training College.
16. Lady Doak College, Madurai.
17. Law College.
18. Loyola College.
19. Madras Christian College.
20. Madras Medical College.
21. Madurai Medical College.
22. Meston Training College.
23. Pachaiyappa's College.
24. Pasteur Institute, Coonoor.
25. Presidency College.
26. Queen Mary's College.
27. S. N. College, Virudunagar.
28. Stanley Medical College.
29. Stella Maris College.
30. St. Christophers' Training College.
31. St. Joseph's College, Trichy.
32. St. Joseph's College, Bangalore.
33. S. I. E. T. Women's College.
34. Teachers College.
35. Thiagaraja College, Madurai.
36. University Library.
37. Vivekananda College.
38. Women's Christian College.

ANDHRA

39. Agriculture College, Bapatla.
40. Andhra Medical College, Vishakapatnam
41. Director, Animal Husbandry & Fisheries, Andhra, Hyderabad.
42. Osmania Veterinary College, Hyderabad.

ASSAM

43. Veterinary College, Gauhati.

BENGAL

44. Director, Animal Husbandry, Bengal, Calcutta.
45. Veterinary College, Calcutta.
46. National Library, Calcutta.

BIHAR

47. Veterinary College, Patna.

BOMBAY

48. Bombay Veterinary College, Bombay.
49. Dr. Rockfeller, Virus Research Institute, Bombay.

DELHI

50. Indian Council of Agricultural Research, New Delhi.
51. Pusa Agriculture Research Institute, Delhi.

KASHMIR

52. Director, Animal Husbandry, Kashmir.

KERALA

53. Assumption College, Thevara.
54. L. M. S. College, Kottayam.
55. Director, Animal Husbandry, Kerala, Trivandurm.
56. Government Bremen College, Tellicherry
57. Guruvayurappan College, Calicut.
58. Kerala Veterinary College, Trichur.

MADHYA BHARAT

59. Director, Animal Husbandry, Madhya Bharat.
60. Veterinary College, Madhya Bharat.

MYSORE

61. Director, Animal Husbandry, Mysore, Bangalore.
62. Indian Dairy Research Institute, Bangalore.

ORISSA

63. Director, Animal Husbandry, Orissa.
64. Veterinary College, Orissa.

PUNJAB

65. Indian Veterinary Research Institute.
66. Veterinary College, Lahore.
67. Punjab Veterinary College. (Hissar cattle farm)

RAJASTHAN

68. Veterinary College, Rajasthan.

UTTAR PRADESH

69. Animal Husbandry, Commissioner, Lucknow.
70. Veterinary College, Mathura.

FOREIGN

AUSTRALIA

71. Australian Veterinary Journal, Sydney.

BELGIUM

72. Natura en Geneakurdige, Royal Veterinary College, Brussels.

CANADA

73. Ontario Veterinary College.

CEYLON

74. Faculty of Veterinary Medicine, Colombo.
75. Ceylon Journal of Veterinary Seience.

CHINA

76. Chinese Medical Association.

FRANCE

77. Chief of Veterinary Services, Pasteur Institute, Paris.
78. Veterinary College, Paris.

GERMANY

79. Oveker Biochof Buch drukerej verlaff Ausfelf Dutsches Reich.
80. Hannover Veterinary College.
81. Veterinary College, Berlin.

HOLLAND

82. Vlaams Diergineeskunding Tijdshift.

ITAYL

83. Spallinzani Institute of Artificial Insemination, Milan.
84. Veterinary School, University of Milon.

JAVA

85. Netherlandsch Indische Bladenvoor, Java.

PAKISTAN

86. Dacca Veterinary College, Dacca.
87. Punjab Veterinary College, Lahore.

PHILLIPINES

88. College of Veterinary Medicine, University of Philipines.

SOUTH AFRICA

89. South African Veterinary Medicine Association, Hony. Librarian
90. Director of Veterinary Services, Pretoria.

SWEDEN

91. Royal Veterinary College, Stockholm.

SWITZERLAND

92. Veterinary College, Berne.
93. Veterinary College, Zurich.
94. Veterinary Pathology Division, Zurich.

UNITED KINGDOM

95. A. V. C. School, England.
96. Foot & Mouth Disease Laboratory, Pisbright, Surrey.
97. Homnal Dairy Research Institute, Ayre, Scotland.
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105. Rowett Research Institute, Aberdeen.
106. Royal Veterinary College, Dublin.
107. Royal Veterinary College, Edinburgh.
108. Royal Veterinary College, London.
109. Russel Greig Edinburgh.
110. Faculty of Veterinary Science, Liverpool.
111. Veterinary Education Director, Glascow
112. Veterinary Journal, W.C. 2.
113. Director, Veterinary Laboratory, Weybridge.
114. Veterinary Laboratory, Storment, Belfast.
115. Veterinary Record, London.

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116. College of Veterinary Medicine, University of California.
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124. Lederle Veterinary Bulletin.
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127. North American Veterinarian, Evanston, Illinois.
128. Ohio State University, Ohio Columbus.
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131. School of Veterinary Medicine, Texas.

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